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MELUCK Refrigeraton Unit Manual



Our company reserves the right to modify the specification in the catalogue without the advance notice.





# 美乐柯集团简介

## MELUCK Group Company Profile

美乐柯集团，是集研发设计、制造、销售、工程安装及售后服务于一体的大型现代化企业。自1993年创建以来，凭借尖端研发技术和丰富的实践经验，现已发展成为集团化企业。总部及其研发中心，位于上海南翔工业区。旗下拥有上海美乐柯制冷设备有限公司、安徽美乐柯空调设备有限公司、浙江冰峰空调设备有限公司三家分公司。

秉承“创新促发展，服务促市场”的经营理念，坚持“以人为本，追求卓越”的企业宗旨，在全国设立60多个代理机构，覆盖全国大、中、小城市，形成全国营销网络体系。根据客户需求，自主研发10多款系列产品，因其“更节能、更环保、更灵活”的使用特点，获得用户高度评价。产品远销中东、欧洲、澳洲、东南亚、非洲等几十个国家和地区，现在为客群提供全套生产设备与解决方案。

已获得ISO9001:2008国际质量体系认证证书，产品拥有国家进出口自营权；通过国际权威机构CE、SGS质量安全认证和CQC认证；成为中国制冷学会团体会员、中国质量检验学会团体会员、中国知识产权保护协会会员、浙江企业文化团体会员，拥有中华人民共和国特种设备制造许可证和全国工业产品生产许可证。

**企业愿景：**成为行业内最受推崇和尊敬的品牌。

**企业使命：**成为国际领先的制冷成套设备、制冷换热器及压力容器供应商和服务商。

Shanghai Meluck Group Company is an advanced enterprise specializing in R&D, manufacturing, marketing, construction contracting, post sale service of refrigeration and relevant equipments. It has grown very fast, now become a company group, features top R&D capability, rich experience, since it was established in 1993. With its headquarter, R&D center, and Marketing center in Nanxiang Shanghai, there are mainly 3 companies under the group company: Shanghai Meluck Refrigeration Equipment Co. Ltd., Anhui Meluck Air Conditon Equipment Company Ltd., and Zhejiang Bingfeng Air Condition Equipment Company Ltd.

Keeping a business philosophy of “Achieve development with innovation, expand market with service”, Shanghai Meluck Group has set over 60 branches and agencies over China, make a complete sales network covering all cities of the country. Now Meluck company dedicates itself in providing better quality, more energy saving refrigeration, tries to make more contribution to the global energy saving and consumption decrease object, it has sold its products of over 10 series to all parts of the world as Mid east, Europe, Australia, South east Asia, Africa etc.

It has registered for ISO9001 quality system certification, got government license for export and import. Its products have got certificates of CE, SGS, and CQC etc. It has become the member of China Refrigeration Institute, The Association of the Quality testing and measuring, The Association of Intellectual Property Protection of China, and The Association of Enterprise Culture of Zhejiang Province. It has got the License for Special Equipment Manufacturing of P.R.C, and the License for The National Industrial Product Manufacturing of China.

**Vision:** To be the most respected brand of the refrigeration brand in the world.

**Mission:** To be the global leading supplier of products and service for refrigeration Units, heat transfer, and high pressure vessels.





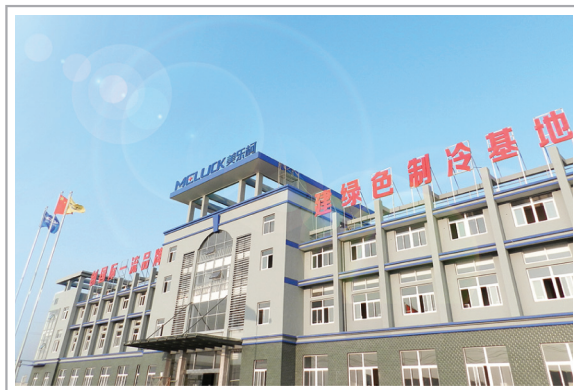
# 美乐柯分公司

## MELUCK Branch



### Meluck Headquarter

As a Strategic headquarter, occupies over 18000 SQM, has complete product lines, including Box type condensing unit, Mono block, Split type, Hanbell unit, open type condensing unit, compressor rack, industrial chiller, low noise condensing unit, water cooled and air cooled units etc, and has owned several patents some key components developed.



### Shanghai Meluck Anhui Division

Shanghai Meluck Anhui Division—Anhui Meluck Air-condition Equipment Co.,Ltd. invested about U.S dollar Twenty Six Million, with 83000m2 area; is one of the biggest refrigeration equipment manufacturing bases in China, specialized in manufacturing and researching for the refrigeration equipments like air cooled condenser, evaporator, condensing unit, industry chiller etc. the factory will be put into production in 2012.



### Shanghai Melluck Zhejiang Division

Shanghai Meluck Zhejiang Division—Zhejiang Bingfeng Air condition company located in Science & Technology Ind. Zone, Kanman, Yunhuan, Taizhou city with 15 Acre, mainly specialized in producing “BINGFENG” pressure vessels like shell and tube condenser, dry evaporator, liquid receiver etc. The annual output is about U.S. Dollar 9 million.





## 企业荣誉

## Enterprise Qualification

### 不断创新

Innovation

### 确保客户对我们的产品满意

for the customer's satisfaction

### 被我们的服务感动，争创名优！

With our excellent service and product



企业营业执照  
Company Business License



中国制冷协会会员证书  
Membership Certificate for Chinese Association of Refrigeration



农业机械推广证书  
Certificate for Agricultural Machine Promotion



农业机械推广证书  
Certificate for Agricultural Machine Promotion



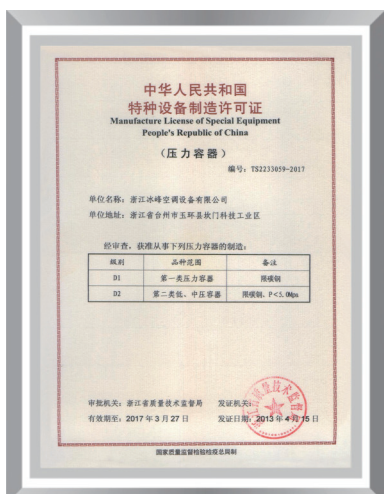
全国工业产品生产许可证  
The National License for Industrial Product Manufacturing



空调安装维修资质证书  
Certificate for Air Conditioning Installation and Maintenance



全国工业产品生产许可证  
The National License for Industrial Product Manufacturing



压力容器制造许可证  
The National License for Special Vessel Manufacturing



ISO质量体系认证  
ISO Quality System Registration Certificate



ISO质量体系认证  
ISO Quality System Registration Certificate

## 先进设备

## Advanced Machines Guarantee High Quality

### 先进的设备和精湛的生产工艺，

铸就了美乐柯产品的优秀品质！

Advance equipment created excellent production and high quality of Meluck products.



静电粉末喷涂生产线  
Static electricity powder painting production line



数控弯管机  
Digital Pipe Bender



喷砂设备  
Sand blast equipment



卧式胀管机  
Horizontal Type Pipe Expansion Machine



高速翅片冲床  
High Speed Fin Punching Machine



四柱油压机  
4 Column Oil Pressing Machine





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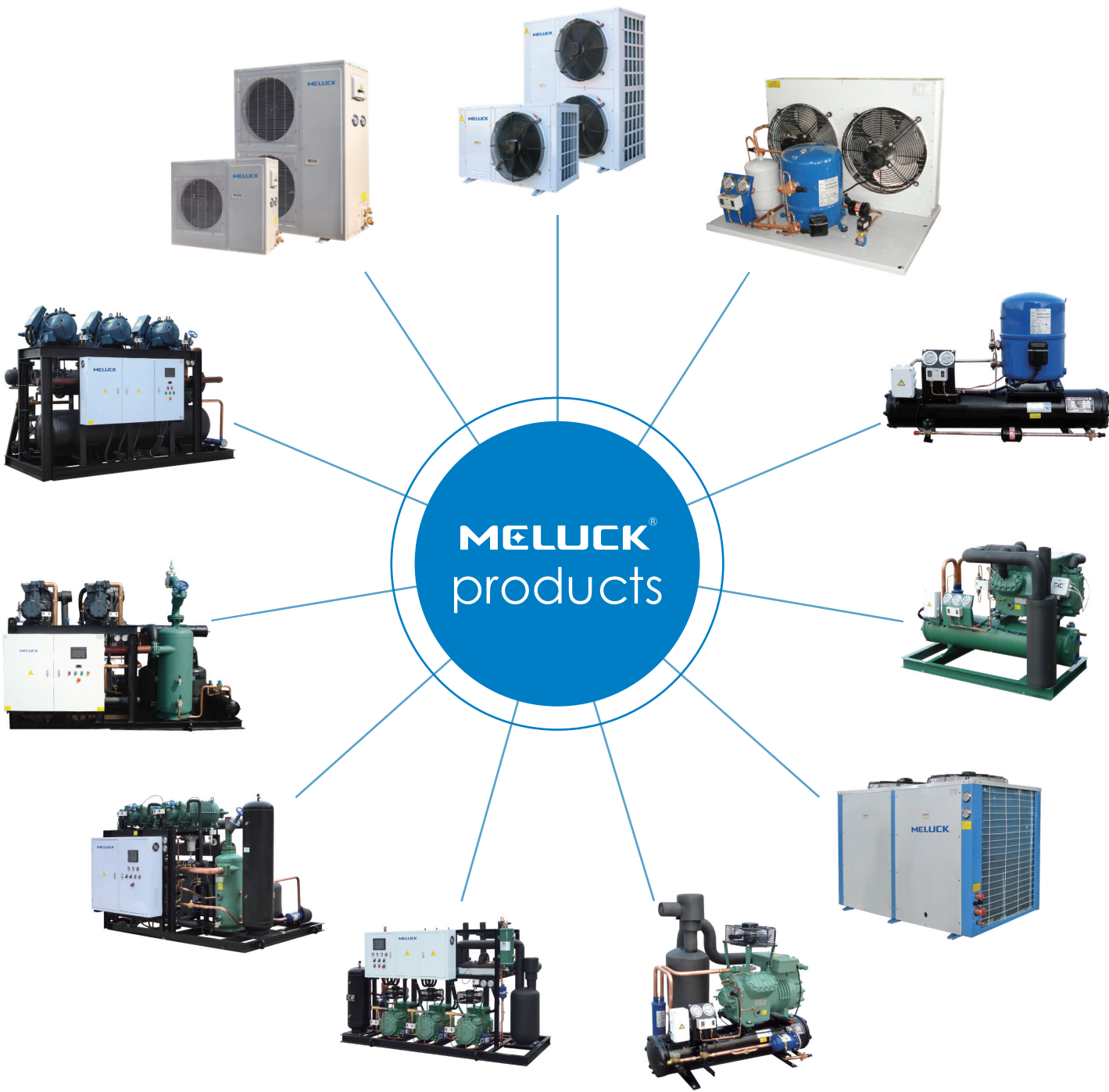
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# XJQ -E Series Box Type Condensing Units

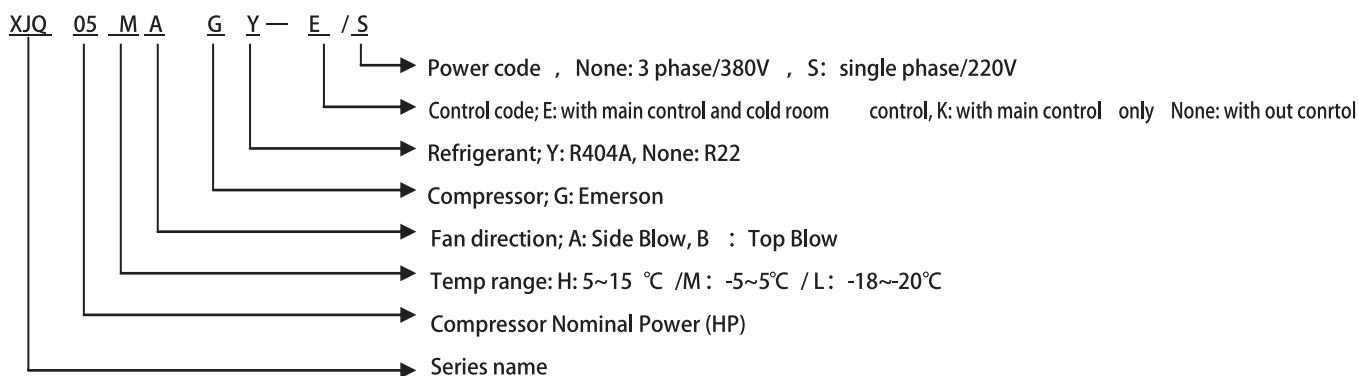
## 1. Product description :

According to demands of market, we design this new series XJQ -E on basis of XJQ series. This new series products feature box type structure with hermetic compressor and control box, which is compact and pleasant looking, applicable to cold display cases, cold storage rooms, ice producers etc. The applicable temperature ranges are:  $-5^{\circ}\text{C} \sim 15^{\circ}\text{C}$ ,  $-5^{\circ}\text{C} \sim 5^{\circ}\text{C}$  and  $-15^{\circ}\text{C} \sim 25^{\circ}\text{C}$ . They can be widely used in hotels, restaurants, medicines, agricultural, chemicals industries all other place where cold storage is needed.

Features of these series products:

- ◆ Electric components were added on the basis of old XJQ series, including condensing unit, main control board, cold room temp control board and operation board. Cold room temp control board and operation board are optional.
- ◆ Main control board can start/stop compressor by system low voltage, be suitable for super market, milk container, water chiller etc. If all optional included, system can control compressor by temp., with function of temp. and defrosting adjustment. The complete set of control system can be used for cold room directly, no extra controller required.
- ◆ With multi protections including phase protection, phase lack, over current, too constant start of compressor, discharge temp and system high/low temp.
- ◆ With fan speed regulator, to adjust condensing fan according to condensing temp.
- ◆ With operation data display function, to check operation current of compressor, discharge temp. and condensing temp.
- ◆ With system alarm function. When fault effects, the system will make alarm beep sound to remind user.
- ◆ The operation board can show temp. setting, defrosting control, operation system data checking and cold room temp. alarm functions. It can be installed apart from condensing units for remote control.

## 2. Model code :



## 3. Main components

① Compressor ② suction and discharge valves ③ oil heating belt ④ condenser ⑤ liquid receiver ⑥ Drier&filter ⑦ sight glasses ⑧ solenoid valve ⑨ diaphragm type pressure switch ⑩ H/L pressure gauge ⑪ in/out pipe connection valve ⑫ liquid injection valve ⑬ enhanced gas injection ⑭ mechanical type low voltage control

XJQ02H-XJQ05H: Item ①.④.⑤.⑥.⑦.⑧.⑨.⑩.⑪; optional: ⑭

XJQ08H-XJQ15H: Item ①.②.③.④.⑤.⑥.⑦.⑨.⑩; optional: ⑭

XJQ02M-XJQ07M: Item ①.④.⑤.⑥.⑦.⑧.⑨.⑩.⑪; optional: ⑭

XJQ08M-XJQ15M: Item ①.②.③.④.⑤.⑥.⑦.⑧.⑨.⑩; optional: ⑭

XJQ02L-XJQ07L: Item ①.②.③.④.⑤.⑥.⑦.⑧.⑨.⑩.⑪; ;

XJQ05L-XJQ15L: Item ①.②.③.④.⑤.⑥.⑦.⑧.⑨.⑩.⑬; ; optional: ⑭

For condensing units without solenoid valve, we suggest user to install solenoid valve near expansion valve.

Notice: Please select s evaporator fan motor with 220V power supply.



## 4. Specifications:

### 4.1 High temperature units

| Model                   |                | XJQ02HAG -E    | XJQ03HAG -E | XJQ04HAG -E  | XJQ05HAG -E |
|-------------------------|----------------|----------------|-------------|--------------|-------------|
| Room temperature ( °C)  |                | 5°C ~15 °C     |             |              |             |
| Power supply            |                | 380V/3Ph/50 HZ |             |              |             |
| Refrigerant             |                | R22            |             |              |             |
| Compressor model        |                | ZB15KQ         | ZB21KQ/ZR36 | ZB 29KQ/ZR47 | ZB38KQ/VR61 |
| Condenser               | Fan Qty        | 1              | 1           | 2            | 2           |
|                         | Fan Voltage(V) | 220            | 220         | 220          | 220         |
|                         | Fan Input(W)   | 60             | 60          | 60×2         | 60×2        |
| Cap. & input            | Te 5°C         | Cap(W)         | 5770        | 8400         | 11300       |
|                         |                | input(W)       | 1560        | 2300         | 2930        |
|                         | Te 0°C         | Cap(W)         | 4830        | 7020         | 9430        |
|                         |                | input(W)       | 1540        | 2270         | 2890        |
| Pipe                    | Gas dia(mm)    |                | φ 19        | φ 19         | φ 19        |
|                         | Liquid dia(mm) |                | φ 10        | φ 10         | φ 12        |
| Overall sizes           | L (mm)         |                | 1020        | 1020         | 1020        |
|                         | W (mm)         |                | 420         | 420          | 420         |
|                         | H (mm)         |                | 840         | 840          | 1240        |
| Install sizes (A×B)(mm) |                | 580×380        | 580×380     | 580×380      | 580×380     |
| Overall sizes           |                | A              |             |              |             |

| Model                   |                  | XJQ08HBG -E   | XJQ09 HBG -E | XJQ10HBG -E  | XJQ12HBG -E  | XJQ13HBG -E  | XJQ15HBG -E   |
|-------------------------|------------------|---------------|--------------|--------------|--------------|--------------|---------------|
| Room temperature ( °C)  |                  | 5 ~15 °C      |              |              |              |              |               |
| Power supply            |                  | 380V/3Ph/50HZ |              |              |              |              |               |
| Refrigerant             |                  | R22           |              |              |              |              |               |
| Compressor model        |                  | ZB58KQ/VR94   | ZB66KQ/VR108 | ZB76KQ/VR125 | ZB88KQ/VR144 | ZB95KQ/VR160 | ZB114KQ/VR190 |
| Condenser               | Fan Qty          | 1             | 2            | 2            | 2            | 2            | 2             |
|                         | Fan Voltage(V)   | 380           | 380          | 380          | 380          | 380          | 380           |
|                         | Fan Input(W)     | 550           | 460×2        | 460×2        | 460×2        | 550×2        | 550×2         |
| Cap. & input            | Te 5°C           | Cap(W)        | 22400        | 25300        | 29700        | 34000        | 36300         |
|                         |                  | input(W)      | 5500         | 6140         | 7260         | 8220         | 9290          |
|                         | Te 0°C           | Cap(W)        | 18550        | 21100        | 24900        | 28500        | 30200         |
|                         |                  | input(W)      | 5470         | 6070         | 7180         | 8130         | 9200          |
| Pipe                    | Gas dia. (mm)    |               | φ 28         | φ 28         | φ 28         | φ 28         | φ 28          |
|                         | Liquid dia. (mm) |               | φ 16         | φ 16         | φ 16         | φ 16         | φ 16          |
| Overall sizes           | L (mm)           |               | 967          | 1354         | 1354         | 1354         | 1870          |
|                         | W (mm)           |               | 825          | 825          | 825          | 825          | 925           |
|                         | H (mm)           |               | 1035         | 1025         | 1025         | 1025         | 1035          |
| Install sizes (A×B)(mm) |                  | 570X785       | 950×785      | 950×785      | 950×785      | 755×885      | 755×885       |
| Overall sizes           |                  | B             |              |              |              |              |               |

Remark : 1) Cooling capacity at condensing temp. 45 °C; 2) 220V/50Hz power models are available for 2HP~4HP units, of which ZB26KQ will be used for 4 HP model units. 3) Evaporator must use 220V single phase fan motor .



## 4.2 Mid temperature units

### 4.2.1 Refrigerant R22

| Model                  |                  | XJQ02MAG -E    | XJQ03MAG -E | XJQ04MAG -E | XJQ05MAG -E | XJQ06MAG -E | XJQ07MAG -E |
|------------------------|------------------|----------------|-------------|-------------|-------------|-------------|-------------|
| Room temperature ( °C) |                  | -5°C ~5 °C     |             |             |             |             |             |
| Power supply           |                  | 380V/3Ph/50 HZ |             |             |             |             |             |
| Compressor model       |                  | ZB15KQ         | ZB21KQ      | ZB29KQ      | ZB38KQ      | ZB45KQ      | ZB48KQ      |
| Condenser              | Fan Qty          | 1              | 1           | 1           | 2           | 2           | 2           |
|                        | Fan Voltage(V)   | 220            | 220         | 220         | 220         | 220         | 220         |
|                        | Fan Input(W)     | 60             | 60          | 60          | 60×2        | 60×2        | 60×2        |
| Cap. & input           | Te -5°C          | Cap(W)         | 4000        | 5820        | 7810        | 9710        | 12950       |
|                        |                  | Input (W)      | 1520        | 2240        | 2860        | 3610        | 4630        |
|                        | Te -7°C          | Cap(W)         | 3690        | 5370        | 7220        | 8970        | 10900       |
|                        |                  | Input (W)      | 1510        | 2230        | 2840        | 3590        | 4200        |
|                        | Te -10°C         | Cap(W)         | 3260        | 4740        | 6380        | 7920        | 9640        |
|                        |                  | Input (W)      | 1510        | 2220        | 2830        | 3580        | 4180        |
| Pipe                   | Gas dia. (mm)    |                | φ 19        | φ 19        | φ 19        | φ 19        | φ 19        |
|                        | Liquid dia. (mm) |                | φ 10        | φ 10        | φ 12        | φ 12        | φ 12        |
| Overall sizes          | L (mm)           |                | 1020        | 1020        | 1020        | 1020        | 1020        |
|                        | W (mm)           |                | 420         | 420         | 420         | 420         | 420         |
|                        | H (mm)           |                | 840         | 840         | 840         | 1240        | 1240        |
| Install sizes(A×B)(mm) |                  | 580×380        | 580×380     | 580×380     | 580×380     | 580×380     | 580×380     |
| Overall sizes          |                  | A              |             |             |             |             |             |

| Model                  |                  | XJQ08MBG -E   | XJQ09MBG -E | XJQ10MBG -E | XJQ12MBG -E | XJQ13MBG -E | XJQ15MBG -E |
|------------------------|------------------|---------------|-------------|-------------|-------------|-------------|-------------|
| Room temperature       |                  | -5°C ~5       |             |             |             |             |             |
| Power supply           |                  | 380V/3Ph/50HZ |             |             |             |             |             |
| Compressor model       |                  | ZB58KQ        | ZB66KQ      | ZB76KQ      | ZB88KQ      | ZB95KQ      | ZB114KQ     |
| Condenser              | Fan Qty          | 1             | 1           | 1           | 1           | 2           | 2           |
|                        | Fan Voltage(V)   | 380           | 380         | 380         | 380         | 380         | 380         |
|                        | Fan Input(W)     | 550           | 550         | 550         | 550         | 460×2       | 460×2       |
| Cap. & input           | Te -5°C          | Cap(W)        | 15100       | 17450       | 20600       | 23500       | 24700       |
|                        |                  | Input (W)     | 5460        | 6030        | 7130        | 8070        | 9110        |
|                        | Te -7°C          | Cap(W)        | 13850       | 16150       | 19050       | 21700       | 22500       |
|                        |                  | Input (W)     | 5460        | 6010        | 7110        | 8050        | 9060        |
|                        | Te -10°C         | Cap(W)        | 12000       | 14250       | 16850       | 19100       | 19500       |
|                        |                  | Input (W)     | 5470        | 5990        | 7070        | 8010        | 8990        |
| Pipe                   | Gas dia. (mm)    |               | φ 28        | φ 28        | φ 28        | φ 28        | φ 28        |
|                        | Liquid dia. (mm) |               | φ 16        | φ 16        | φ 16        | φ 16        | φ 16        |
| Overall sizes          | L (mm)           |               | 967         | 967         | 967         | 967         | 1354        |
|                        | W (mm)           |               | 825         | 825         | 825         | 825         | 825         |
|                        | H (mm)           |               | 1035        | 1035        | 1035        | 1035        | 1025        |
| Install sizes(A×B)(mm) |                  | 570×785       | 570×785     | 570×785     | 570×785     | 950×785     | 950×785     |
| Overall sizes          |                  | B             |             |             |             |             |             |

Remark : 1) Cooling capacity at condensing temp. 45 °C; 2) 220V/50Hz power models are available for 2HP~4HP units, of which ZB26KQ will be used for 4 HP model units. 3) Evaporator must use 220V single phase fan motor.



#### 4.2.2 Refrigerant R404A :

| Model                 |                  | XJQ02MAGY -E   | XJQ03MAGY -E | XJQ04MAGY -E | XJQ05MAGY -E | XJQ06MAGY -E | XJQ07MAGY -E |
|-----------------------|------------------|----------------|--------------|--------------|--------------|--------------|--------------|
| Room temperature      |                  | -15℃ ~5℃       |              |              |              |              |              |
| Power supply          |                  | 380V/3Ph/50 HZ |              |              |              |              |              |
| Compressor model      |                  | ZB15KQE        | ZB21KQE      | ZB29KQE      | ZB38KQE      | ZB45KQE      | ZB48KQE      |
| Condenser             | Fan Qty          | 1              | 1            | 1            | 2            | 2            | 2            |
|                       | Fan Voltage(V)   | 220            | 220          | 220          | 220          | 220          | 220          |
|                       | Fan Input(W)     | 60             | 60           | 60           | 60×2         | 60×2         | 60×2         |
| Cap. & input          | Te-5℃            | Cap(W)         | 3820         | 5740         | 7790         | 9830         | 11500        |
|                       |                  | Input (W)      | 1760         | 2500         | 3310         | 4180         | 5210         |
|                       | Te-10℃           | Cap(W)         | 3080         | 4680         | 6360         | 8020         | 9380         |
|                       |                  | Input (W)      | 1820         | 2510         | 3330         | 4200         | 5230         |
|                       | Te-15℃           | Cap(W)         | 2430         | 3780         | 5130         | 6480         | 7580         |
|                       |                  | Input (W)      | 1880         | 2510         | 3330         | 4210         | 5240         |
|                       | Te-20℃           | Cap(W)         | 1870         | 3020         | 4100         | 5170         | 6050         |
|                       |                  | Input (W)      | 1930         | 2520         | 3340         | 4210         | 5240         |
| pipe                  | Gas dia. (mm)    | φ 19           | φ 19         | φ 19         | φ 19         | φ 19         | φ 19         |
|                       | Liquid dia. (mm) | φ 10           | φ 10         | φ 12         | φ 12         | φ 12         | φ 12         |
| Overall sizes         | L (mm)           | 1020           | 1020         | 1020         | 1020         | 1020         | 1020         |
|                       | W (mm)           | 420            | 420          | 420          | 420          | 420          | 420          |
|                       | H (mm)           | 840            | 840          | 840          | 1240         | 1240         | 1240         |
| Instal sizes(A×B)(mm) |                  |                | 580×380      | 580×380      | 580×380      | 580×380      | 580×380      |
| Overall sizes         |                  | A              |              |              |              |              |              |

| Model                 |                  | XJQ08 MBGY -E  | XJQ09MBGY -E | XJQ10MBGY -E | XJQ13MBGY -E | XJQ15MBGY -E |
|-----------------------|------------------|----------------|--------------|--------------|--------------|--------------|
| Room temperature      |                  | -15℃ ~5℃       |              |              |              |              |
| Power supply          |                  | 380V/3Ph/50 HZ |              |              |              |              |
| Compressor model      |                  | ZB58KQE        | ZB66KQE      | ZB76KQE      | ZB95KQE      | ZB114KQE     |
| Condenser             | Fan Qty          | 1              | 1            | 1            | 2            | 2            |
|                       | Fan Voltage(V)   | 380            | 380          | 380          | 380          | 380          |
|                       | Fan Input(W)     | 550            | 550          | 550          | 460×2        | 460×2        |
| Cap. & input          | Te -5℃           | Cap(W)         | 15300        | 17100        | 20400        | 25000        |
|                       |                  | Input (W)      | 6360         | 7090         | 8290         | 10700        |
|                       | Te -10℃          | Cap(W)         | 12400        | 14000        | 16600        | 20300        |
|                       |                  | Input (W)      | 6320         | 7050         | 8220         | 10600        |
|                       | Te-15℃           | Cap(W)         | 9480         | 11300        | 13350        | 16100        |
|                       |                  | Input (W)      | 6320         | 7020         | 8150         | 10600        |
|                       | Te-20℃           | Cap(W)         | 7520         | 9000         | 10550        | 12200        |
|                       |                  | Input (W)      | 6360         | 6980         | 8100         | 10600        |
| pipe                  | Gas dia. (mm)    | φ 28           | φ 28         | φ 28         | φ 28         | φ 28         |
|                       | Liquid dia. (mm) | φ 16           | φ 16         | φ 16         | φ 16         | φ 16         |
| Overall sizes         | L (mm)           | 967            | 967          | 967          | 1354         | 1354         |
|                       | W (mm)           | 825            | 825          | 825          | 825          | 825          |
|                       | H (mm)           | 1035           | 1035         | 1035         | 1025         | 1025         |
| Instal sizes(A×B)(mm) |                  | 570×785        | 570×785      | 570×785      | 950×785      | 900×785      |
| Overall sizes         |                  | B              |              |              |              |              |

Remark : 1) Cooling capacity at condensing temp. 45℃; 2) 220V/50Hz power models are available for 2HP~4HP units, of which ZB26KQ will be used for 4 HP model units. 3) Evaporator must use 220V single phase fan motor .



#### 4.3 Low temperature series.

##### 4.3.1 Refrigerant R22

| Model                  |                | XJQ02LAG -E    | XJQ03LAG -E | XJQ04LAG -E | XJQ05LBG -E | XJQ06LBG -E | XJQ08LBG -E |
|------------------------|----------------|----------------|-------------|-------------|-------------|-------------|-------------|
| Room temperature       |                | -18℃ ~20 ℃     |             |             |             |             |             |
| Power supply           |                | 380V/3Ph/50 HZ |             |             |             |             |             |
| Compressor model       |                | ZF06KQ         | ZF09KQ      | ZF11KQ      | ZF15KQ      | ZF18KQ      | ZF25KQ      |
| Condenser              | Fan Qty        | 1              | 1           | 1           | 1           | 1           | 1           |
|                        | Fan Voltage(V) | 220            | 220         | 220         | 220         | 220         | 220         |
|                        | Fan Input(W)   | 60             | 60          | 60          | 60X2        | 60X2        | 60X2        |
| Cap. & input           | Te<br>-25℃     | Cap(W)         | 2250        | 2980        | 3870        | 5630        | 6810        |
|                        |                | Input (W)      | 1600        | 2020        | 2430        | 3350        | 4200        |
|                        | Te<br>-30℃     | Cap(W)         | 1820        | 2380        | 3160        | 4600        | 5560        |
|                        |                | Input (W)      | 1570        | 1980        | 2370        | 3250        | 4110        |
|                        | Te<br>-35℃     | Cap(W)         | 1480        | 1870        | 2520        | 3670        | 4500        |
|                        |                | Input (W)      | 1590        | 1960        | 2300        | 3170        | 4020        |
| pipe                   | Gas dia(mm)    |                | φ 19        | φ 19        | φ 19        | φ 22        | φ 22        |
|                        | Liquid dia(mm) |                | φ 10        | φ 10        | φ 10        | φ 12        | φ 12        |
| Overall sizes          | L (mm)         |                | 1020        | 1020        | 1020        | 1020        | 967         |
|                        | W (mm)         |                | 420         | 420         | 420         | 420         | 675         |
|                        | H (mm)         |                | 840         | 840         | 840         | 1240        | 815         |
| Install sizes(A×B)(mm) |                | 580×380        | 580×380     | 580×380     | 580×380     | 580×380     | 570×635     |
| Overall sizes          |                | A              |             |             |             |             | B           |

Remark: 1)Cooling capacity at condensing temperature 45℃,insuction temperature 18℃;2) 2HP model are available 220V/50HZ power;3)Evaporator must use 220V fan motor.

| Model                    |                 | XJQ08LBG-E     | XJQ12LBG-E | XJQ13LBG-E | XJQ15LBG-E |
|--------------------------|-----------------|----------------|------------|------------|------------|
| Temperature (℃)          |                 | -18℃ ~-30 ℃    |            |            |            |
| Power supply             |                 | 380V/3Ph/50 HZ |            |            |            |
| Compressor model         |                 | QF125A         | QF175A     | QF185A     | QF205A     |
| Condenser                | Fan Qty         | 1              | 1          | 1          | 1          |
|                          | Fan Voltage (V) | 220            | 220        | 220        | 220        |
|                          | Fan Input (W)   | 550            | 550        | 550        | 550        |
| Cap & input              | Te<br>-25℃      | Cap (W)        | 8200       | 10000      | 11800      |
|                          |                 | Input (W)      | 5000       | 6200       | 7400       |
|                          | Te<br>-30℃      | Cap (W)        | 6500       | 8100       | 9600       |
|                          |                 | Input (W)      | 4800       | 6000       | 7000       |
|                          | Te<br>-35℃      | Cap (W)        | 5000       | 6500       | 7700       |
|                          |                 | Input (W)      | 4700       | 5800       | 6600       |
|                          | Te<br>-40℃      | Cap (W)        | 3700       | 5200       | 6100       |
|                          |                 | Input (W)      | 4600       | 5600       | 6200       |
| Pipe                     | Gas dia (mm)    |                | φ 28       | φ 28       | φ 28       |
|                          | Liquid dia (mm) |                | φ 16       | φ 16       | φ 16       |
| Overall sizer            | L (mm)          |                | 967        | 967        | 967        |
|                          | W (mm)          |                | 825        | 825        | 825        |
|                          | H (mm)          |                | 1035       | 1035       | 1035       |
| Install sizes (A×B) (mm) |                 | 570×785        | 570×785    | 570×785    | 570×785    |
| Overall size             |                 | B 型            |            |            |            |

Remark: Cooling capacity at condensing temperature 45℃,insuction temperature 20℃; 2)Evaporator must use 220V fan motor.



#### 4.3.2 RefrigerantR404A

| Model                  |                 | XJQ02LAGY -E   | XJQ03LAGY -E | XJQ04LAGY -E | XJQ05LBGY -E | XJQ06LBGY -E | XJQ08LBGY -E |
|------------------------|-----------------|----------------|--------------|--------------|--------------|--------------|--------------|
| Room temperature       |                 | -18℃ ~20 ℃     |              |              |              |              |              |
| Power supply           |                 | 380V/3Ph/50 HZ |              |              |              |              |              |
| Compressor model       |                 | ZSI06KQE       | ZSI09KQE     | ZSI11KQE     | ZSI15KQE     | ZSI18KQE     | ZSI21KQE     |
| Condenser              | Fan Qty         | 1              | 1            | 1            | 2            | 2            | 2            |
|                        | Fan Voltage(V)  | 220            | 220          | 220          | 220          | 220          | 220          |
|                        | Fan Input(W)    | 60             | 60           | 60           | 60X2         | 60X2         | 60X2         |
| Cap. & input           | Te-25℃          | Cap(W)         | 2320         | 3270         | 4140         | 5930         | 7220         |
|                        |                 | Input (W)      | 1760         | 2260         | 2640         | 3580         | 4430         |
|                        | Te-30℃          | Cap(W)         | 1870         | 2640         | 3350         | 4820         | 5900         |
|                        |                 | Input (W)      | 1730         | 2210         | 2580         | 3520         | 4290         |
|                        | Te-35℃          | Cap(W)         | 1500         | 2070         | 2620         | 3780         | 4770         |
|                        |                 | Input (W)      | 1700         | 2120         | 2450         | 3500         | 4200         |
| Pipe                   | Gas dia.(mm)    | φ 19           | φ 19         | φ 19         | φ 19         | φ 19         | φ 19         |
|                        | Liquid dia.(mm) | φ 10           | φ 10         | φ 10         | φ 12         | φ 12         | φ 12         |
| Overall sizes          | L (mm)          | 1020           | 1020         | 1020         | 1020         | 1020         | 1020         |
|                        | W (mm)          | 420            | 420          | 420          | 420          | 420          | 420          |
|                        | H (mm)          | 840            | 840          | 840          | 1240         | 1240         | 1240         |
| Install sizes(A×B)(mm) |                 | 580×380        | 580×380      | 580×380      | 580×380      | 580×380      | 580×380      |
| Overall sizes          |                 | A              |              |              |              |              | B            |

Remark : Cooling capacity at condensing temperture 45℃,insuction temperture 18℃;2) 2HP model are available 220V/50HZ power;3)Optional evaporator must use 220V fan motor.

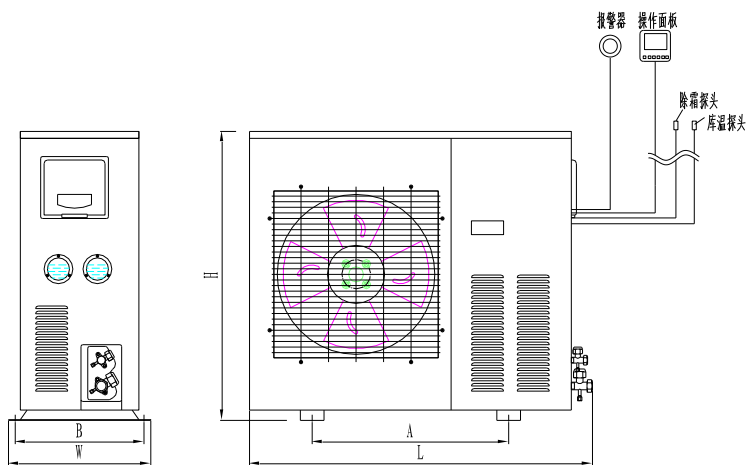
| Model                      |                 | XJQ08LBGY-E    | XJQ12LBGY-E | XJQ13LBGY-E | XJQ15LBGY-E |
|----------------------------|-----------------|----------------|-------------|-------------|-------------|
| Temperature ( ℃ )          |                 | -18℃ ~-30 ℃    |             |             |             |
| Power supply               |                 | 380V/3Ph/50 HZ |             |             |             |
| Compressor model           |                 | QF125AE        | QF175AE     | QF185AE     | QF205AE     |
| Condenser                  | Fan Qty         | 1              | 1           | 1           | 1           |
|                            | Fan Voltage (V) | 220            | 220         | 220         | 220         |
|                            | Fan Input (W)   | 550            | 550         | 550         | 550         |
| Cap & input                | Te -25℃         | Cap (W)        | 9400        | 11100       | 12400       |
|                            |                 | Input (W)      | 5800        | 6900        | 7800        |
|                            | Te -30℃         | Cap (W)        | 7700        | 8800        | 10200       |
|                            |                 | Input (W)      | 5600        | 6600        | 7500        |
|                            | Te -35℃         | Cap (W)        | 6200        | 7300        | 8400        |
|                            |                 | Input (W)      | 5400        | 6300        | 7200        |
| Pipe                       | Te -40℃         | Cap (W)        | 4800        | 6800        | 7000        |
|                            |                 | Input (W)      | 510000      | 6100        | 7000        |
|                            | Gas dia (mm)    | φ28            | φ28         | φ28         | φ28         |
| Overall size               | Liquid dia (mm) | φ16            | φ16         | φ16         | φ16         |
|                            | L (mm)          | 967            | 967         | 967         | 967         |
|                            | W (mm)          | 825            | 825         | 825         | 825         |
|                            | H (mm)          | 1035           | 1035        | 1035        | 1035        |
| Install sizes (A × B) (mm) |                 | 570×785        | 570×785     | 570×785     | 570×785     |
| Overall size               |                 | B              |             |             |             |

Remark: Cooling capacity at condensing temperture 45℃,insuction temperture 20℃;2)Evaporator must use 220V fan motor.

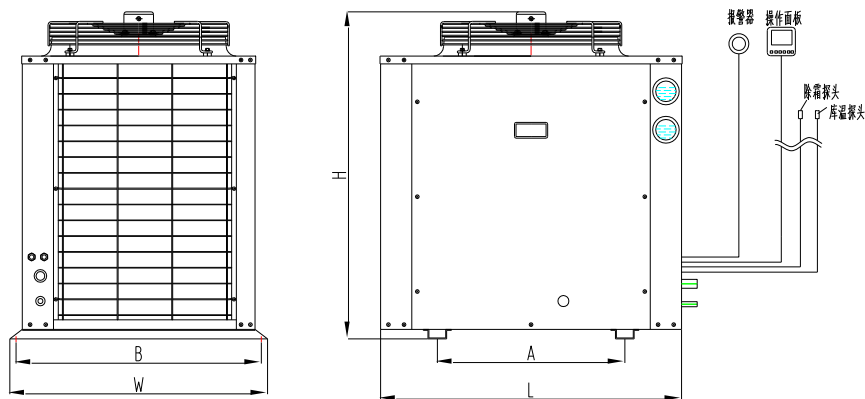


5. Diagrams for Overall sizes :

A



B

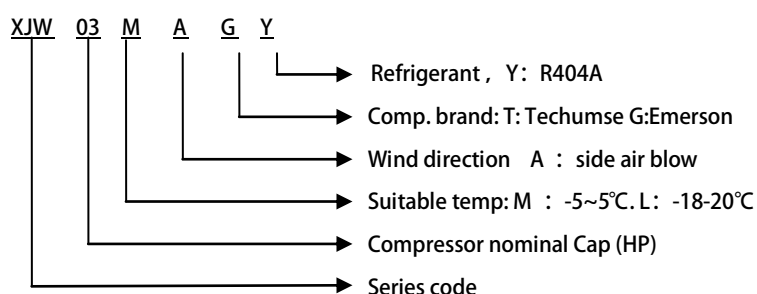


## XJW Series Box Type Condensing Units

### 1. Product description

- ◆ World famous refrigerant compressor ;
- ◆ Compact box type construction for easy installation
- ◆ High efficient and low noise 6 -pole condenser fan motor
- ◆ Condensing fan motor control available for duo fan units
- ◆ World famous refrigerant components
- ◆ With electric control box, and multi protection functions including phase lack, overload, too constant compressor on/off and high/low pressure.

### 2. Model code



### 3. Main components

#### 3.1 Techumse compressor series :

| Model            |                              |           | XJW0.6MATY  | XJW01MATY   | XJW1.7MATY  | XJW02MATY    | XJW03MATY    |
|------------------|------------------------------|-----------|-------------|-------------|-------------|--------------|--------------|
| Room temperature |                              |           | -5~5℃       |             |             |              |              |
| Refrigerant      |                              |           | R404A       |             |             |              |              |
| Power supply     |                              |           | 220V/50HZ   |             |             | 380V/50HZ    |              |
| Comp             | Model                        |           | Hermetical  |             |             |              |              |
|                  | Type                         |           | CAJ9480Z    | CAJ9510Z    | CAJ4519Z    | TFH4524Z     | TFH4531Z     |
|                  | Max current (A)              |           | 6.6         | 8.0         | 15.4        | 6.3          | 8.2          |
| Con fan          | Fan number                   |           | 1           | 1           | 1           | 1            | 1            |
|                  | Air flow (m <sup>3</sup> /h) |           | 1700        | 1700        | 1700        | 3200         | 3200         |
|                  | Fan power (W)                |           | 80          | 80          | 80          | 100          | 100          |
|                  | Fan voltage                  |           | 220V/50HZ   |             |             |              |              |
| Cap. & Input     | Te0℃                         | Cap(W)    | 1874        | 2310        | 4070        | 4830         | 6143         |
|                  |                              | Input (W) | 820         | 980         | 1850        | 2090         | 2610         |
|                  | Te-5℃                        | Cap(W)    | 1553        | 1924        | 3340        | 3890         | 4990         |
|                  |                              | Input (W) | 760         | 910         | 1720        | 1920         | 2385         |
|                  | Te-10℃                       | Cap(W)    | 1266        | 1572        | 2700        | 3050         | 3970         |
|                  |                              | Input (W) | 700         | 840         | 1590        | 1740         | 2150         |
| Pipe             | Oversize(LXWXH)mm            |           | 975x450x535 | 975x450x535 | 975x450x535 | 1175x500x635 | 1175x500x635 |
|                  | Installation size(AXB)mm     |           | 650x400     | 650x400     | 650x400     | 800x450      | 800x450      |

Cooling capacity at condensing temp 45 °C



| Model                    |                              |           | XJW01LATY   | XJW1.5LATY  | XJW02LATY    | XJW03LATY    |
|--------------------------|------------------------------|-----------|-------------|-------------|--------------|--------------|
| Room temperatur e        |                              |           | -15℃ ~20 ℃  |             |              |              |
| Refrigerant              |                              |           | R404A       |             |              |              |
| Power supply             |                              |           | 220V/50HZ   |             | 380/50HZ     |              |
| Comp                     | Model                        |           | Hermetical  |             |              |              |
|                          | Type                         |           | CAJ2446Z    | CAJ2464Z    | TFH2480Z     | TFH2511Z     |
|                          | Max current (A)              |           | 7.9         | 10.0        | 4.8          | 5.0          |
| Con fan                  | Fan number                   |           | 1           | 1           | 1            | 1            |
|                          | Air flow (m <sup>3</sup> /h) |           | 1700        | 1700        | 3200         | 4600         |
|                          | Fan power (W)                |           | 80          | 80          | 100          | 160          |
|                          | Fan voltage                  |           | 220V/50HZ   |             |              |              |
| Cap. & Input             | Te-20℃                       | Cap(W)    | 1296        | 1673        | 2416         | 3348         |
|                          |                              | Input (W) | 950         | 1250        | 1837         | 2312         |
|                          | Te-25℃                       | Cap(W)    | 1005        | 1300        | 1865         | 2518         |
|                          |                              | Input (W) | 837         | 1100        | 1585         | 1960         |
|                          | Te-30℃                       | Cap(W)    | 755         | 990         | 1347         | 1817         |
|                          |                              | Input (W) | 723         | 955         | 1326         | 1635         |
| Oversize(LXWXH)mm        |                              |           | 975X450X535 | 975X450X535 | 1175X500X635 | 1175X500X635 |
| Installation size(AXB)mm |                              |           | 650X400     | 650X400     | 800X450      | 800X450      |

Cooling capacity at condensing temp 45 ℃

### 3.2 Copeland compressor ZB series

| Model                    |                              |           | XJW02MAGY    | XJW03MAGY    | XJW04MAGY     | XJW05MAGY     | XJW06MAGY     |
|--------------------------|------------------------------|-----------|--------------|--------------|---------------|---------------|---------------|
| Room temperature         |                              |           | 5℃ ~15 ℃     |              |               |               |               |
| Refrigerant              |                              |           | R404A        |              |               |               |               |
| Power supply             |                              |           | 380V/50 HZ   |              |               |               |               |
| Comp                     | Model                        |           | scroll       |              |               |               |               |
|                          | Type                         |           | ZB15KQE      | ZB21KQE      | ZB29KQE       | ZB38KQE       | ZB45KQE       |
|                          | Max current (A)              |           | 6.0          | 8.0          | 11.0          | 12.5          | 16.1          |
|                          |                              |           |              |              |               |               |               |
| Con fan                  | Fan number                   |           | 1            | 1            | 2             | 2             | 2             |
|                          | Air flow (m <sup>3</sup> /h) |           | 3200         | 4600         | 6400          | 9200          | 9200          |
|                          | Fan power (W)                |           | 100          | 160          | 100×2         | 160×2         | 160×2         |
|                          | Fan voltage                  |           |              |              |               |               |               |
| Cap. & Input             | Te0℃                         | Cap(W)    | 4760         | 6990         | 9480          | 11950         | 14000         |
|                          |                              | Input (W) | 1720         | 2480         | 3290          | 4150          | 4700          |
|                          | Te -5℃                       | Cap(W)    | 3820         | 5740         | 7790          | 9830          | 11500         |
|                          |                              | Input (W) | 1760         | 2500         | 3310          | 4180          | 4730          |
|                          | Te-10℃                       | Cap(W)    | 3080         | 4680         | 6360          | 8020          | 9380          |
|                          |                              | Input (W) | 1820         | 2510         | 3330          | 4200          | 4750          |
|                          | Te-15℃                       | Cap(W)    | 2430         | 3780         | 5130          | 6480          | 7580          |
|                          |                              | Input (W) | 1880         | 2510         | 3330          | 4210          | 4760          |
|                          | Te -20℃                      | Cap(W)    | 1870         | 3020         | 4100          | 5170          | 6050          |
|                          |                              | Input (W) | 1930         | 2520         | 3340          | 4210          | 4770          |
| Oversize(LXWXH)mm        |                              |           | 1175X500X635 | 1175X500X635 | 1175X500X1235 | 1175X500X1235 | 1175X500X1235 |
| Installation size(AXB)mm |                              |           | 800X450      | 800X450      | 800X450       | 800X450       | 800X450       |

Cooling capacity at condensing temp 45 ℃

### 3.3 Copeland compressor ZF series :

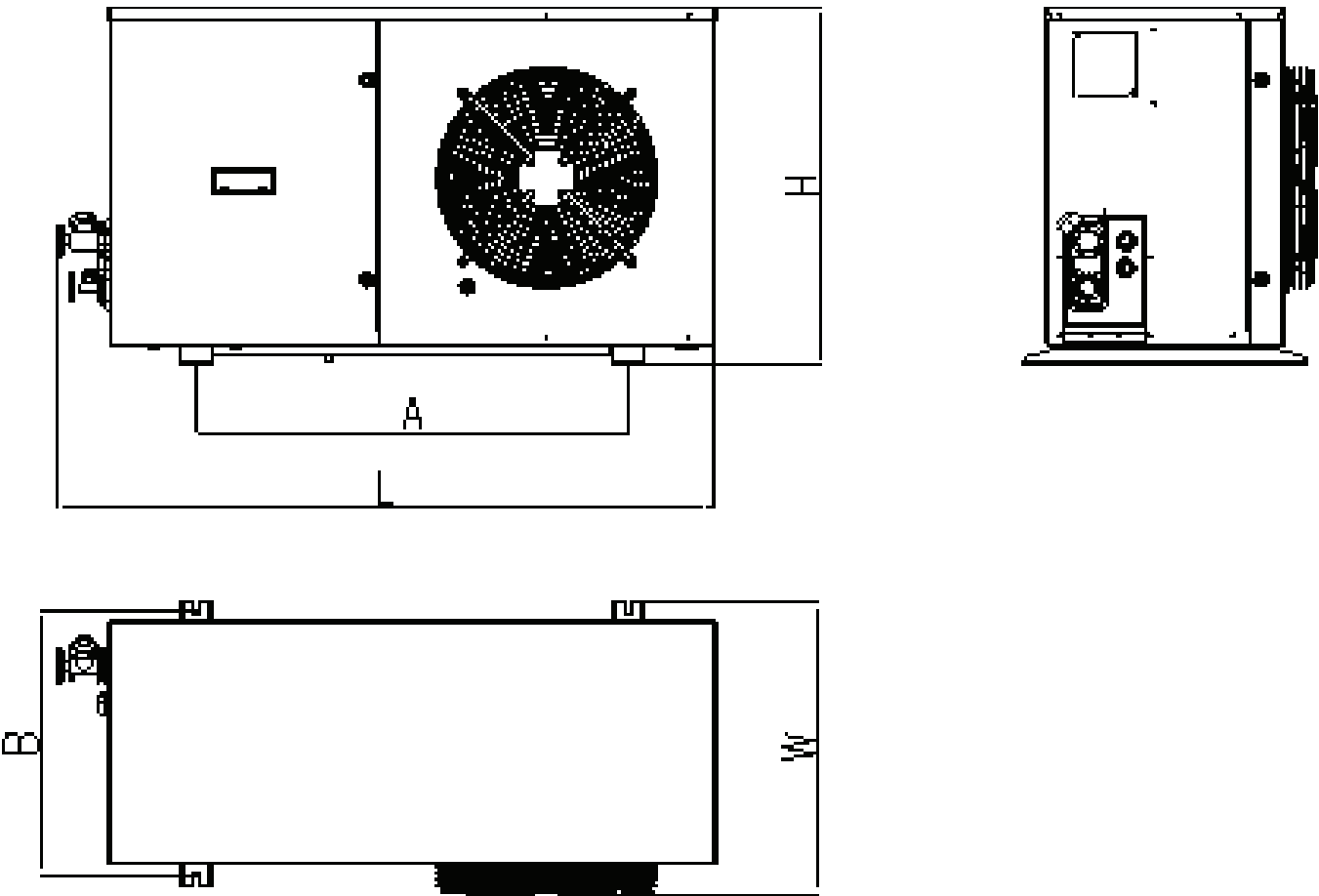
| Model            |                              |           | XJW02LAGY          | XJW03LAGY | XJW04LAGY | XJW05LAGY | XJW06LAGY |
|------------------|------------------------------|-----------|--------------------|-----------|-----------|-----------|-----------|
| Room temperature |                              |           | -18℃ ~-35 ℃        |           |           |           |           |
| Refrigerant      |                              |           | R404A              |           |           |           |           |
| Power supply     |                              |           | 380V/3 Phase/50 HZ |           |           |           |           |
| Comp             | Model                        |           | Scroll             |           |           |           |           |
|                  | Type                         |           | ZF06KQE            | ZF09KQE   | ZF11KQE   | ZF15KQE   | ZF18KQE   |
|                  | Max current (A)              |           | 5                  | 6         | 8         | 10        | 12.5      |
| Con fan          | Fan number                   |           | 1                  | 1         | 1         | 2         | 2         |
|                  | Air flow (m <sup>3</sup> /h) |           | 3200               | 3200      | 4600      | 6400      | 9200      |
|                  | Fan power (W)                |           | 100                | 100       | 160       | 100×2     | 160×2     |
|                  | Fan voltage                  |           | 220V/50HZ          |           |           |           |           |
| Ca p. & Input    | Te-25℃                       | Cap(W)    | 1710               | 2340      | 2930      | 4130      | 5020      |
|                  |                              | Input (W) | 1640               | 2030      | 2460      | 3400      | 4010      |
|                  | Te-30℃                       | Cap(W)    | 1370               | 1860      | 2340      | 3270      | 3990      |
|                  |                              | Input (W) | 1590               | 1990      | 2400      | 3250      | 3880      |
|                  | Te-35℃                       | Cap(W)    | 1080               | 1460      | 1850      | 2560      | 3140      |
|                  |                              | Input (W) | 1550               | 1960      | 2350      | 3110      | 3760      |
|                  | Te-40℃                       | Cap(W)    | 830                | 1130      | 1430      | 1960      | 2430      |
|                  |                              | Input (W) | 1510               | 1960      | 2330      | 2950      | 3650      |
| pipe             | Gas (inch)                   |           | 3/4SAE             | 3/4SAE    | 3/4SAE    | 7/8SAE    | 7/8SAE    |
|                  | Liquid (inch)                |           | 3/8SAE             | 3/8SAE    | 3/8SAE    | 1/2SAE    | 1/2SAE    |
| Size Drawing     |                              |           | NO.2               | NO.2      | NO.2      | NO.3      | NO.3      |

| Model            |                              | XJW08LAGY      | XJW10LAGY | XJW13LAGY |          |
|------------------|------------------------------|----------------|-----------|-----------|----------|
| Room temperature |                              | -18℃ ~35 ℃     |           |           |          |
| Refrigerant      |                              | R404A          |           |           |          |
| Power supply     |                              | 380V/3Ph/50 HZ |           |           |          |
| Comp             | Model                        |                | Scroll    |           |          |
|                  | Type                         | ZF25KQE        | ZF34KQE   | ZF41KQE   |          |
|                  | Max current (A)              | 16.1           | 22.6      | 25.1      |          |
| Con fan          | Fan number                   |                | 2         | 2         |          |
|                  | Air flow (m <sup>3</sup> /h) |                | 9200      | 10580     |          |
|                  | Fan power (W)                |                | 160×2     | 230×2     |          |
|                  | Fan voltage                  |                | 220V/50HZ |           |          |
| Cap. & Input     | Te-25℃                       | Cap(W)         | 6370      | 8750      | 10850    |
|                  |                              | Input (W)      | 5360      | 7060      | 8920     |
|                  | Te-30℃                       | Cap(W)         | 5080      | 6950      | 8640     |
|                  |                              | Input (W)      | 5130      | 6700      | 8490     |
|                  | Te-35℃                       | Cap(W)         | 3970      | 5430      | 6740     |
|                  |                              | Input (W)      | 4880      | 6310      | 8060     |
|                  | Te-40℃                       | Cap(W)         | 2980      | 4140      | 5090     |
|                  |                              | Input (W)      | 4620      | 5910      | 7620     |
| Pipe             | Gas (inch)                   |                | 7/8SAE    | 1-1/8ODS  | 1-1/8ODS |
|                  | Liquid (inch)                |                | 1/2SAE    | 5/8ODS    | 5/8ODS   |

Cooling capacity at condensing temp 45 ℃



4. Diagrams for Overall sizes :



## XJB-E Series Box type Semi-hermetic Condensing Units

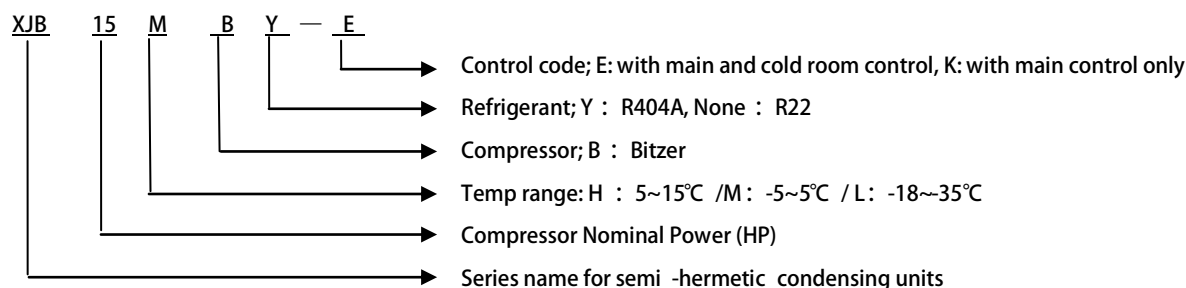
### 1. Product description:

According to demands of market, we design this new series XJB-E on basis of XJB series. This new series products feature box type structure with hermetic compressor and control box, which is compact and pleasant looking, applicable to cold display cases, cold storage rooms, ice producers etc. The applicable temperature ranges are:  $-5^{\circ}\text{C} \sim 15^{\circ}\text{C}$ ,  $-5^{\circ}\text{C} \sim 5^{\circ}\text{C}$  and  $-15^{\circ}\text{C} \sim 25^{\circ}\text{C}$ . They can be widely used in hotels, restaurants, medicines, agricultural, chemicals industries all other place where cold storage is needed.

Features of these series products:

- ◆ Electric components were added on the basis of old XJB series, including condensing unit, main control board, cold room temp control board and operation board. Cold room temp control board and operation board are optional.
- ◆ Main control board can start/stop compressor by system low voltage, be suitable for super market, milk container, water chiller etc. If all optional included, system can control compressor by temp., with function of temp. and defrosting adjustment. The complete set of control system can be used for cold room directly, no extra controller required.
- ◆ With multi protections including phase protection, phase lack, over current, too constant start of compressor, discharge temp and system high/low temp.
- ◆ With fan speed regulator, to adjust condensing fan according to condensing temp.
- ◆ With operation data display function, to check operation current of compressor, discharge temp. and condensing temp.
- ◆ With system alarm function. When fault effects, the system will make alarm beep sound to remind user.
- ◆ The operation board can show temp., setting, defrosting control, operation system data checking and coldroom temp. alarm functions. It can be installed apart from condensing units for remote control.

### 2. Model code:



### 3. Main components

① Compressor ② oil heating belt ③ Vibration Eliminator ④ Oil Separator ⑤ condenser ⑥ liquid receiver ⑦ filter ⑧ sight glass ⑨ solenoid valve ⑩ H/L pressure gauge ⑪ mechanical pressure switch ⑫ Oil pressure protection ⑬ oil/liquid accumulator ⑭ Low pressure control (for compressor)

XJB03MB...XJB09MB.XJB02MBY...XJB06MBY.XJB04LBY...XJB06LBY:

Standard : ①.②.⑤.⑥.⑦.⑨.⑧.⑩.⑪;

XJB10MB...XJB20MB.XJB09MBY...XJB14MBY.XJB09LBY...XJB14LBY:

Standard : ①.②.③.⑤.⑥.⑦.⑧.⑨.⑩.⑪; Optional : ④.⑬

XJB25MB...XJB30MB.XJB18MBY...XJB23MBY.XJB18LBY...XJB34LBY:

Standard : ①.②.③.④.⑤.⑥.⑦.⑧.⑨.⑩.⑪. ; Optional : ⑬

For condensing units with main controller only, is standard



## 4. Specifications

1. Medium Temperature series (Applicable for  $T_e$  -5~20℃):

1) R22 units

| Model                    |                 | XJB03MB-E     | XJB04MB-E | XJB05MB-E | XJB06MB-E | XJB07MB-E | XJB09MB-E |
|--------------------------|-----------------|---------------|-----------|-----------|-----------|-----------|-----------|
| Room temperature         |                 | -5℃ ~5℃       |           |           |           |           |           |
| Power supply             |                 | 380V/3Ph/50HZ |           |           |           |           |           |
| Compressor model         |                 | 2DES-3        | 2CES-4    | 4FES-5    | 4EES-6    | 4DES-7    | 4CES-9    |
| Condenser                | Fan Qty         | 1             | 1         | 1         | 1         | 1         | 1         |
|                          | Fan Voltage(V)  | 220           | 220       | 220       | 220       | 220       | 220       |
|                          | Fan Input(W)    | 240           | 240       | 240       | 460       | 460       | 550       |
| Cap&input                | Te-5℃           | Cap(W)        | 7850      | 9660      | 10300     | 13100     | 15660     |
|                          |                 | input(W)      | 2.97      | 3.65      | 3.83      | 4.9       | 7.22      |
|                          | Te-10℃          | Cap(W)        | 6330      | 7820      | 8270      | 10540     | 12630     |
|                          |                 | input(W)      | 2.76      | 3.4       | 3.56      | 4.54      | 6.72      |
|                          | Te-15℃          | Cap(W)        | 5040      | 6250      | 6540      | 8360      | 10400     |
|                          |                 | input(W)      | 2.53      | 3.12      | 3.25      | 4.14      | 6.16      |
| Pipe                     | Gas dia.(mm)    |               | φ22       | φ22       | φ22       | φ28       | φ28       |
|                          | Liquid dia.(mm) |               | φ12       | φ12       | φ12       | φ12       | φ12       |
| Overall sizes            | L (mm)          |               | 967       | 967       | 967       | 967       | 967       |
|                          | W (mm)          |               | 675       | 675       | 675       | 825       | 825       |
|                          | H (mm)          |               | 815       | 815       | 815       | 1035      | 1035      |
| Install sizes (A×B (mm)) |                 | 570×635       | 570×635   | 570×635   | 570×785   | 570×785   | 570×785   |

| Model                    |                 | XJB12MB-E     | XJB15MB-E | XJB20MB-E | XJB25MB-E | XJB30MB-E |
|--------------------------|-----------------|---------------|-----------|-----------|-----------|-----------|
| Room temperature         |                 | -5℃ ~5℃       |           |           |           |           |
| Power supply             |                 | 380V/3Ph/50HZ |           |           |           |           |
| Compressor model         |                 | 4TES-12       | 4PES-15   | 4NES-20   | 4HE-25    | 4GE-30    |
| Condenser                | Fan Qty         | 2             | 2         | 2         | 2         | 2         |
|                          | Fan Voltage(V)  | 220           | 220       | 220       | 220       | 220       |
|                          | Fan Input(W)    | 460×2         | 460×2     | 550×2     | 780×2     | 780×2     |
| Cap&input                | Te-5℃           | Cap(W)        | 25200     | 28800     | 34000     | 45400     |
|                          |                 | input(W)      | 8.83      | 10.05     | 11.81     | 15.86     |
|                          | Te-10℃          | Cap(W)        | 20200     | 23000     | 27200     | 36400     |
|                          |                 | input(W)      | 8.15      | 9.23      | 10.88     | 14.66     |
|                          | Te-15℃          | Cap(W)        | 15920     | 17990     | 21400     | 28800     |
|                          |                 | input(W)      | 7.39      | 8.32      | 9.86      | 13.33     |
| Pipe                     | Gas dia.(mm)    |               | φ35       | φ42       | φ42       | φ54       |
|                          | Liquid dia.(mm) |               | φ16       | φ16       | φ22       | φ22       |
| Overall sizes            | L (mm)          |               | 1354      | 1354      | 1870      | 1870      |
|                          | W (mm)          |               | 825       | 825       | 925       | 925       |
|                          | H (mm)          |               | 1235      | 1235      | 1235      | 1235      |
| Install sizes (A×B) (mm) |                 | 950×785       | 950×785   | 755×885   | 755×885   | 755×885   |

Remark: 1) Above data under conditions of Ambient Temp. 32℃, condensing temp. 45℃;

2) All fan motor for evaporator should with power supply 220V AC.

2) Refrigerant R404A/R507A :

| Model                   |                 |          | XJB02MBY -E   | XJB03MBY -E | XJB04MBY -E | XJB05MBY -E | XJB06MBY -E |
|-------------------------|-----------------|----------|---------------|-------------|-------------|-------------|-------------|
| Room temperature        |                 |          | -5℃ ~5 ℃      |             |             |             |             |
| Power supply            |                 |          | 380V/3Ph/50HZ |             |             |             |             |
| Compressor model        |                 |          | 2DES-2Y       | 2CES-3Y     | 4EES-4Y     | 4DES-5Y     | 4CES-6Y     |
| Condenser               | Fan Qty         |          | 1             | 1           | 1           | 1           | 1           |
|                         | Fan Voltage(V)  |          | 220           | 220         | 220         | 220         | 220         |
|                         | Fan Input(W)    |          | 240           | 240         | 460         | 460         | 550         |
| Cap.& input             | Te<br>-5℃       | Cap(W)   | 7770          | 9590        | 13220       | 15800       | 19150       |
|                         |                 | input(W) | 3.41          | 4.16        | 5.76        | 6.8         | 8.13        |
|                         | Te<br>-10℃      | Cap(W)   | 6220          | 7700        | 10560       | 12610       | 15250       |
|                         |                 | input(W) | 3.13          | 3.84        | 5.34        | 6.3         | 7.51        |
|                         | Te<br>-15℃      | Cap(W)   | 4900          | 6100        | 8330        | 9940        | 11980       |
|                         |                 | input(W) | 2.84          | 3.5         | 4.87        | 5.75        | 6.82        |
| Pipe                    | Gas dia.(mm)    |          | φ 22          | φ 22        | φ 28        | φ 28        | φ 28        |
|                         | Liquid dia.(mm) |          | φ 12          | φ 12        | φ 12        | φ 12        | φ 12        |
| Overall sizes           |                 | L (mm)   | 967           | 967         | 967         | 967         | 967         |
|                         |                 | W (mm)   | 675           | 675         | 825         | 825         | 825         |
|                         |                 | H (mm)   | 815           | 815         | 1035        | 1035        | 1035        |
| Install sizes (A×B (mm) |                 |          | 570×635       | 570×635     | 570×785     | 570×785     | 570×785     |

| Model                   |                 |          | XJB09MBY -E   | XJB12MBY -E | XJB14MBY -E | XJB18MBY -E | XJB23MBY -E |
|-------------------------|-----------------|----------|---------------|-------------|-------------|-------------|-------------|
| Room temperature        |                 |          | -5℃ ~5 ℃      |             |             |             |             |
| Power supply            |                 |          | 380V/3Ph/50HZ |             |             |             |             |
| Compressor model        |                 |          | 4TES-9Y       | 4PES-12Y    | 4NES-14Y    | 4HE-18Y     | 4GE-23Y     |
| Condenser               | Fan Qty         |          | 2             | 2           | 2           | 2           | 2           |
|                         | Fan Voltage(V)  |          | 220           | 220         | 220         | 220         | 220         |
|                         | Fan Input(W)    |          | 460×2         | 460×2       | 550×2       | 780×2       | 780×2       |
| Cap.& input             | Te-5℃           | Cap(W)   | 24200         | 27600       | 32900       | 44200       | 51000       |
|                         |                 | input(W) | 10.18         | 11.29       | 13.63       | 18.39       | 22.0        |
|                         | Te-10℃          | Cap(W)   | 19160         | 21800       | 26100       | 35400       | 41100       |
|                         |                 | input(W) | 9.28          | 10.27       | 12.48       | 16.89       | 20.1        |
|                         | Te-15℃          | Cap(W)   | 14960         | 16850       | 20300       | 28000       | 32600       |
|                         |                 | input(W) | 8.32          | 9.17        | 11.23       | 15.3        | 18.21       |
| Pipe                    | Gas dia.(mm)    |          | φ 35          | φ 35        | Φ35         | Φ42         | φ 54        |
|                         | Liquid dia.(mm) |          | φ 16          | φ 16        | φ 22        | φ 22        | φ 22        |
| Overall sizes           |                 | L (mm)   | 1354          | 1354        | 1870        | 1870        | 1870        |
|                         |                 | W (mm)   | 825           | 825         | 925         | 925         | 925         |
|                         |                 | H (mm)   | 1235          | 1235        | 1235        | 1235        | 1235        |
| Install sizes (A×B (mm) |                 |          | 950×785       | 950×785     | 755×885     | 755×885     | 755×885     |

Remark: 1 ) Above data under conditions of Ambient Temp. 32 ℃, condensing temp.45 ℃;

2) All fan motor for eva porator should with power supply 220V AC.



2.Low Temperature series (Applicable for Te -20~40°C, refrigerant R404A/R507A )

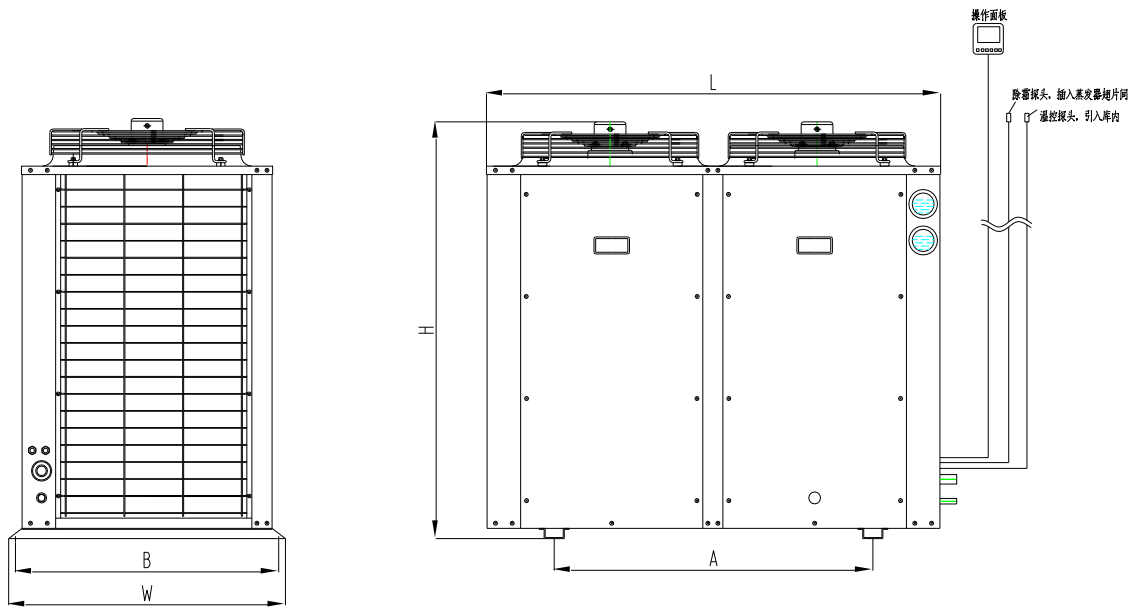
| Model                   |                | XJB04LBY-E     | XJB05LBY-E | XJB06LBY-E | XJB09LBY-E | XJB12LBY-E | XJB14LBY-E |
|-------------------------|----------------|----------------|------------|------------|------------|------------|------------|
| Room temperature        |                | -15°C ~30°C    |            |            |            |            |            |
| Power supply            |                | 380V/3Ph/50 HZ |            |            |            |            |            |
| Compressor model        |                | 4EES-4Y        | 4DES-5Y    | 4CES-6Y    | 4TES-9Y    | 4PES-12Y   | 4NES-14Y   |
| Condenser               | Fan Qty        | 1              | 1          | 1          | 1          | 1          | 1          |
|                         | Fan Voltage(V) | 220            | 220        | 220        | 220        | 220        | 220        |
|                         | Fan Input(W)   | 240            | 240        | 240        | 550        | 550        | 550        |
|                         | Te<br>-25°C    | Cap(W)         | 4940       | 5900       | 7040       | 8620       | 9500       |
|                         |                | input(W)       | 3.84       | 4.55       | 5.36       | 6.35       | 6.88       |
|                         | Te<br>-30°C    | Cap(W)         | 3690       | 4400       | 5220       | 6310       | 6830       |
|                         |                | input(W)       | 3.32       | 3.94       | 4.61       | 5.38       | 5.74       |
|                         | Te<br>-35°C    | Cap(W)         | 2680       | 3200       | 3760       | 4460       | 4710       |
|                         |                | input(W)       | 2.8        | 3.34       | 3.89       | 4.46       | 4.64       |
| Pipe                    | Gas dia.(mm)   | Cap(W)         | 1880       | 2250       | 2610       | 3000       | 3060       |
|                         |                | input(W)       | 2.3        | 2.76       | 3.2        | 3.61       | 3.62       |
| Overall sizes           | L (mm)         |                | 967        | 967        | 967        | 967        | 967        |
|                         | W (mm)         |                | 675        | 675        | 675        | 825        | 825        |
|                         | H (mm)         |                | 815        | 815        | 815        | 1235       | 1235       |
| Install sizes (A×B (mm) |                | 570×635        | 570×635    | 570×635    | 570×785    | 570×785    | 570×785    |

| Model                   |                | XJB18LBY-E     | XJB23LBY-E | XJB28LBY-E | XJB34LBY-E |
|-------------------------|----------------|----------------|------------|------------|------------|
| Room temperature        |                | -15°C ~30 °C   |            |            |            |
| Power supply            |                | 380V/3Ph/50 HZ |            |            |            |
| Compressor model        |                | 4HE-18Y        | 4GE-23Y    | 6HE-28Y    | 6GE-34Y    |
| Condenser               | Fan Qty        | 2              | 2          | 2          | 2          |
|                         | Fan Voltage(V) | 220            | 220        | 220        | 220        |
|                         | Fan Input(W)   | 460×2          | 460×2      | 550×2      | 780×2      |
|                         | Te<br>-25°C    | Cap(W)         | 16690      | 19670      | 23500      |
|                         |                | input(W)       | 12.0       | 14.27      | 17.13      |
|                         | Te<br>-30°C    | Cap(W)         | 12450      | 14820      | 17760      |
|                         |                | input(W)       | 10.35      | 12.33      | 14.78      |
|                         | Te<br>-35°C    | Cap(W)         | 9000       | 10870      | 12980      |
|                         |                | input(W)       | 8.75       | 10.46      | 12.46      |
| Pipe                    | Gas dia.(mm)   | Cap(W)         | 6220       | 7690       | 9070       |
|                         |                | input(W)       | 7.23       | 8.71       | 10.22      |
| Overall sizes           | L (mm)         |                | 1354       | 1354       | 1870       |
|                         | W (mm)         |                | 825        | 825        | 925        |
|                         | H (mm)         |                | 1235       | 1235       | 1235       |
| Install sizes (A×B (mm) |                | 950×785        | 950×785    | 755×885    | 755×885    |

Remark: 1 ) Above data under conditions of Ambient Temp.32 °C, condensing temp.45 °C;

2) All fan motor for evaporator should with power supply 220V AC.

## 5. Diagrams for Overall sizes

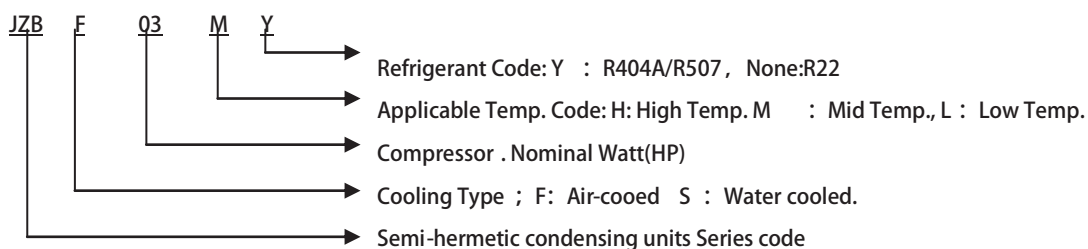


# JZB Series Semi-hermetic Condensing Units

## 1. Product description

- ◆ With Bitzer ECOLINE series semi-hermetic compressor
- ◆ With copper tube -Alu. Fin air cooled condenser or high efficient shell -tube water cooled condenser.
- ◆ Air cooled condensing units with low noise and high efficient external rotor fan motor
- ◆ With high quality China made or imported components
- ◆ System with water-proof cable connection box for easy connection
- ◆ A complete product range with wide temp. range available, can be used for keeping fresh, cold storage, ice making and cold water etc.

## 2. Model code



## 3. Main components

- ① compressor ② oil heating ③ vibration eliminator ④ oil separator ⑤ condenser ⑥ liquid receiver ⑦ filter ⑧ sight glasses ⑨ solenoid valve ⑩ H/L P gauge mechanical Pressure controller ☐ oil pressure protection ☐ gas separator ☐ suction filter

### 3.1 Air Cooled Condensing units :

JZBF02M...JZBF20M.JZBF02M(L)Y...JZBF14M(L)Y:

Standard : ①.②.⑤.⑥.⑦.⑧.⑨.⑩.☒; Optional : ③.④.☒.☒

JZBF25M...JZBF50M.JZBF18M(L)Y...JZBF44M(L)Y:

Standard : ①.②.③.④.⑤.⑥.⑦.⑧.⑨.⑩.☒.☒; Optional : ☒.☒

### 3.2 Water Cooled Condensing units :

JZBS03M...JZBS20M.JZBS02M(L)Y...JZBS14M(L)Y:

Standard : ①.②.⑤.⑦.⑧.⑨.⑩.☒; Optional : ③.④.☒.☒

JZBS25M...JZBS50M.JZBS18M(L)Y...JZBS44M(L)Y:

Standard : ①.②.③.④.⑤.⑦.⑧.⑨.⑩.☒.☒; Optional : ☒.☒



## 4. Specifications:

### 4.1 Air cooled refrigerant

#### 4.1.1 Air cooled Medium Temp. (Applicable for Te -5℃~20℃):

##### 4.1.1.1 Refrigerant R22

| Model                        |                   | JZBF02M         | JZBF03M | JZBF03M | JZBF03M | JZBF04M  | JZBF05M  |
|------------------------------|-------------------|-----------------|---------|---------|---------|----------|----------|
| Comp model                   |                   | 2GES-2          | 2FES-3  | 2EES-3  | 2DES-3  | 2CES-4   | 4FES-5   |
| Temperature (℃)              |                   | -10℃ ~5℃        |         |         |         |          |          |
| Power supply                 |                   | 380V/3Ph./50 HZ |         |         |         |          |          |
| Condenser                    | Fan Qty           | 1               | 1       | 2       | 2       | 2        | 2        |
|                              | Voltage (V)       | 380             | 380     | 380     | 380     | 380      | 380      |
|                              | Input (W)         | 180×1           | 180×1   | 140×2   | 140×2   | 180×2    | 180×2    |
| Comp Cap. & Input            | Te.-5℃            | Cap (W)         | 4270    | 5250    | 6570    | 7850     | 10300    |
|                              |                   | Input (KW)      | 1.76    | 2.14    | 2.48    | 2.97     | 3.83     |
|                              | Te. -10℃          | Cap (W)         | 3460    | 4250    | 5290    | 6330     | 7820     |
|                              |                   | Input (KW)      | 1.65    | 2.0     | 2.3     | 2.76     | 3.4      |
|                              | Te. -15℃          | Cap (W)         | 2780    | 3390    | 4190    | 5040     | 6250     |
|                              |                   | Input (KW)      | 1.53    | 1.86    | 2.11    | 2.53     | 3.12     |
| Pipe                         | Gas In (mm)       | φ16             | φ16     | φ22     | φ22     | φ22      | φ22      |
|                              | Liquid dia. (m m) | φ10             | φ10     | φ12     | φ12     | φ12      | φ12      |
| Overall Size                 | A (mm)            | 620             | 620     | 960     | 960     | 1060     | 1300     |
|                              | B (mm)            | 650             | 650     | 680     | 680     | 680      | 750      |
|                              | C (mm)            | 560             | 560     | 460     | 510     | 720      | 670      |
| Installation size (A×B) (mm) |                   | 580×350         | 580×350 | 920×380 | 920×380 | 1020×380 | 1260×410 |

| Model             |                  | JZBF06M         | JZBF07M  | JZBF09M  | JZBF12M  | JZBF15M  | JZBF20M  |
|-------------------|------------------|-----------------|----------|----------|----------|----------|----------|
| Comp model        |                  | 4EES-6          | 4DES-7   | 4CES-9   | 4TES-12  | 4PES-15  | 4NES-20  |
| Temperature (℃)   |                  | -10℃ ~5℃        |          |          |          |          |          |
| Power supply      |                  | 380V/3Ph./50 HZ |          |          |          |          |          |
| Condenser         | Fan Qty          | 2               | 2        | 2        | 4        | 4        | 4        |
|                   | Voltage (V)      | 380             | 380      | 380      | 380      | 380      | 380      |
|                   | Input (W)        | 180×2           | 250×2    | 250×2    | 180×4    | 180×4    | 180×4    |
| Comp Cap. & Input | Te -5℃           | Cap (W)         | 13100    | 15660    | 19290    | 25200    | 28800    |
|                   |                  | Input (KW)      | 4.9      | 5.8      | 7.22     | 8.83     | 10.05    |
|                   | Te -10℃          | Cap (W)         | 10540    | 12630    | 15610    | 20200    | 23000    |
|                   |                  | Input (KW)      | 4.54     | 5.4      | 6.72     | 8.15     | 9.23     |
|                   | Te -15℃          | Cap (W)         | 8360     | 10040    | 12460    | 15920    | 17990    |
|                   |                  | Input (KW)      | 4.14     | 4.94     | 6.16     | 7.39     | 8.32     |
| Pipe              | Gas In (mm)      | φ28             | φ28      | φ28      | φ35      | φ42      | φ42      |
|                   | Liquid dia. (mm) | φ12             | φ16      | φ16      | φ16      | φ22      | φ22      |
| Overall Size      | A (mm)           | 1300            | 1300     | 1280     | 1280     | 1280     | 1350     |
|                   | B (mm)           | 750             | 750      | 710      | 710      | 750      | 800      |
|                   | C (mm)           | 770             | 870      | 910      | 1210     | 1460     | 1410     |
| Installation size |                  | 1260×410        | 1260×410 | 1000×665 | 1000×665 | 1000×705 | 1000×755 |

| Model             |                  | JZBF25M         | JZBF30M | JZBF35M | JZBF40M | JZBF50M  |
|-------------------|------------------|-----------------|---------|---------|---------|----------|
| Comp model        |                  | 4HE-25          | 4GE -30 | 6HE-35  | 6GE -40 | 6FE-50   |
| Temperature ( °C) |                  | -10°C ~5 °C     |         |         |         |          |
| Power supply      |                  | 380V/3Ph./50 HZ |         |         |         |          |
| Con denser        | Fan Qty          | 2               | 2       | 3       | 3       | 3        |
|                   | Voltage (V)      | 380             | 380     | 380     | 380     | 380      |
|                   | Input (W)        | 780×2           | 780×2   | 800×3   | 800×3   | 800×3    |
| Comp Cap. & Input | Te-5°C           | Cap (W)         | 45400   | 52600   | 68000   | 78100    |
|                   |                  | Input (KW)      | 15.86   | 18.28   | 23.9    | 27.4     |
|                   | Te-10°C          | Cap (W)         | 36400   | 42400   | 54700   | 62700    |
|                   |                  | Input (KW)      | 14.66   | 16.93   | 22.1    | 25.3     |
|                   | Te-15°C          | Cap (W)         | 28800   | 33600   | 43200   | 49600    |
|                   |                  | Input (KW)      | 13.33   | 15.44   | 20.0    | 23.1     |
| Pipe              | Gas In (mm)      | φ 54            | φ 54    | φ 54    | φ 54    | φ 54     |
|                   | Liquid dia. (mm) | φ 22            | φ 22    | φ 28    | φ 28    | φ 28     |
| Overall Size      | A (mm)           | 1150            | 1150    | 1050    | 1050    | 1600     |
|                   | B (mm)           | 570             | 570     | 600     | 600     | 610      |
|                   | C (mm)           | 860             | 860     | 910     | 910     | 880      |
| Installation size |                  | 800×525         | 800×525 | 800×525 | 800×555 | 1000×600 |
| Condenser Size    | A (mm)           | 1840            | 1840    | 2640    | 2640    | 3040     |
|                   | B (mm)           | 980             | 980     | 1030    | 1030    | 1030     |
|                   | C (mm)           | 1100            | 1100    | 1100    | 1100    | 1100     |

Remark : 1) Conde nsing temp. 45 °C 2)Condenser will be separately installed for condensing units Cap. > 25Hp.

#### 4.1.1.2 Refrigerant R404A/R507A:

| Model              |                   | JZBF02MY       | JZBF02MY | JZBF02MY | JZBF02MY | JZBF03MY | JZBF03MY |
|--------------------|-------------------|----------------|----------|----------|----------|----------|----------|
| Comp model         |                   | 2GES-2Y        | 2FES-2Y  | 2EES-2Y  | 2DES-2Y  | 2CES-3Y  | 4FES-3Y  |
| Tempera ture ( °C) |                   | -10°C ~5 °C    |          |          |          |          |          |
| Power supply       |                   | 380V/3Ph/50 HZ |          |          |          |          |          |
| Condenser          | Fan Qty           | 1              | 1        | 2        | 2        | 2        | 2        |
|                    | Voltage (V)       | 380            | 380      | 380      | 380      | 380      | 380      |
|                    | Input (W)         | 180×1          | 180×1    | 140×2    | 140×2    | 180×2    | 180×2    |
| Comp. Cap. & Input | Te-5°C            | Cap (W)        | 4060     | 5010     | 6490     | 7770     | 9590     |
|                    |                   | Input (KW)     | 1.94     | 2.41     | 2.79     | 3.41     | 4.16     |
|                    | Te-10°C           | Cap (W)        | 3240     | 4000     | 5180     | 6220     | 7700     |
|                    |                   | Input (KW)     | 1.81     | 2.25     | 2.56     | 3.13     | 3.84     |
|                    | Te-15°C           | Cap (W)        | 2550     | 3140     | 4070     | 4900     | 6100     |
|                    |                   | Input (KW)     | 1.66     | 2.06     | 2.31     | 2.84     | 3.5      |
| Pipe               | Gas In (mm)       | φ 16           | φ 16     | φ 22     | φ 22     | φ 22     | φ 22     |
|                    | Liquid dia . (mm) | φ 10           | φ 10     | φ 12     | φ 12     | φ 12     | φ 12     |
| Overall Size       | A (mm)            | 620            | 620      | 960      | 960      | 1060     | 1300     |
|                    | B (mm)            | 650            | 650      | 680      | 680      | 680      | 750      |
|                    | C (mm)            | 560            | 560      | 460      | 510      | 720      | 670      |
| Installation size  |                   | 580×350        | 580×350  | 920×380  | 920×380  | 1020×380 | 1260×410 |

| Model                           |                  | JZBF04MY       | JZBF05MY | JZBF06MY | JZBF09MY | JZBF12MY | JZBF14MY |
|---------------------------------|------------------|----------------|----------|----------|----------|----------|----------|
| Comp model                      |                  | 4EES-4Y        | 4DES-5Y  | 4CES-6Y  | 4TES-9Y  | 4PES-12Y | 4NES-14Y |
| Temperature ( °C)               |                  | -10℃ ~5 ℃      |          |          |          |          |          |
| Power supply                    |                  | 380V/3Ph/50 HZ |          |          |          |          |          |
| Condenser                       | Fan Qty          | 2              | 2        | 2        | 4        | 4        | 4        |
|                                 | Voltage (V)      | 380            | 380      | 380      | 380      | 380      | 380      |
|                                 | Input (W)        | 180×2          | 250×2    | 250×2    | 180×4    | 180×4    | 180×4    |
| Comp Cap. & Input               | Te<br>-5℃        | Cap (W)        | 13220    | 15800    | 19150    | 24200    | 32900    |
|                                 |                  | Input (KW)     | 5.76     | 6.8      | 8.13     | 10.18    | 13.63    |
|                                 | Te<br>-10℃       | Cap (W)        | 10560    | 12610    | 15250    | 19160    | 26100    |
|                                 |                  | Input (KW)     | 5.34     | 6.3      | 7.51     | 9.28     | 12.48    |
|                                 | Te<br>-15℃       | Cap (W)        | 8330     | 9940     | 11980    | 14960    | 20300    |
|                                 |                  | Input (KW)     | 4.87     | 5.75     | 6.82     | 8.32     | 9.17     |
| Pipe                            | Gas In (mm)      |                | φ28      | φ28      | φ28      | φ35      | φ35      |
|                                 | Liquid dia. (mm) |                | φ12      | φ16      | φ16      | φ16      | φ22      |
| Overall Size                    |                  | A (mm)         | 1300     | 1300     | 1280     | 1280     | 1350     |
|                                 |                  | B (mm)         | 750      | 750      | 710      | 710      | 800      |
|                                 |                  | C (mm)         | 770      | 870      | 910      | 1210     | 1460     |
| Installation size<br>(A×B) (mm) |                  | 1260×410       | 1260×410 | 1000×665 | 1000×665 | 1000×705 | 1000×755 |

| Model                           |                  | JZBF18MY       | JZBF23MY | JZBF28MY | JZBF34MY | JZBF44MY |
|---------------------------------|------------------|----------------|----------|----------|----------|----------|
| Comp model                      |                  | 4HE-18Y        | 4GE-23Y  | 6HE-28Y  | 6GE-34Y  | 6FE-44Y  |
| Temperature ( °C)               |                  | -10℃ ~5 ℃      |          |          |          |          |
| Power supply                    |                  | 380V/3Ph/50 HZ |          |          |          |          |
| Condenser                       | Fan Qty          | 2              | 2        | 3        | 3        | 3        |
|                                 | Voltage (V)      | 380            | 380      | 380      | 380      | 380      |
|                                 | Input (W)        | 780×2          | 780×2    | 800×3    | 800×3    | 800×3    |
| Comp Cap. & Input               | Te<br>-5℃        | Cap (W)        | 45200    | 52200    | 64900    | 77000    |
|                                 |                  | Input (KW)     | 18.39    | 22.0     | 27.0     | 32.7     |
|                                 | Te<br>-10℃       | Cap (W)        | 37100    | 43000    | 52100    | 63800    |
|                                 |                  | Input (KW)     | 16.89    | 20.1     | 24.9     | 30.1     |
|                                 | Te<br>-15℃       | Cap (W)        | 30100    | 35100    | 41200    | 52300    |
|                                 |                  | Input (KW)     | 15.3     | 18.21    | 22.6     | 27.4     |
| Pipe                            | Gas In (mm)      |                | Φ42      | φ54      | φ54      | φ54      |
|                                 | Liquid dia. (mm) |                | φ22      | φ22      | φ28      | φ28      |
| Overall Size                    |                  | A (mm)         | 1150     | 1150     | 1050     | 1050     |
|                                 |                  | B (mm)         | 570      | 570      | 600      | 600      |
|                                 |                  | C (mm)         | 860      | 860      | 910      | 910      |
| Installation size<br>(A×B) (mm) |                  | 800×525        | 800×525  | 800×525  | 800×555  | 1000×600 |
| Condenser<br>Size               | A (mm)           |                | 1840     | 1840     | 2640     | 2640     |
|                                 | B (mm)           |                | 980      | 980      | 1030     | 1030     |
|                                 | C (mm)           |                | 1100     | 1100     | 1100     | 1100     |

Remark : 1) Condensing temp. 45 °C; 2) Condenser will be separately installed for condensing units Cap. > 18Hp.



## 4.1.2 Air cooled Medium Temp. (Applicable for Te -20°C~-40°C):

| Model                        |                  | JZBF02LY       | JZBF02LY | JZBF02LY | JZBF03LY | JZBF03LY | JZBF04LY |
|------------------------------|------------------|----------------|----------|----------|----------|----------|----------|
| Comp model                   |                  | 2FES-2Y        | 2EES-2Y  | 2DES-2Y  | 2CES-3Y  | 4FES-3Y  | 4EES-4Y  |
| Temperature ( °C)            |                  | -15°C ~30 °C   |          |          |          |          |          |
| Power supply                 |                  | 380V/3Ph/50 HZ |          |          |          |          |          |
| Condenser                    | Fan Qty          | 1              | 1        | 1        | 2        | 2        | 2        |
|                              | Voltage (V)      | 380            | 380      | 380      | 380      | 380      | 380      |
|                              | Input (W)        | 140            | 180      | 180      | 140×2    | 140×2    | 180×2    |
| Comp Cap. & Input            | Te<br>-25°C      | Cap (W)        | 1820     | 2370     | 2870     | 3630     | 4940     |
|                              |                  | Input (KW)     | 1.64     | 1.79     | 2.21     | 2.76     | 3.84     |
|                              | Te<br>-30°C      | Cap (W)        | 1330     | 1720     | 2110     | 2690     | 3690     |
|                              |                  | Input (KW)     | 1.42     | 1.53     | 1.89     | 2.39     | 3.32     |
|                              | Te<br>-35°C      | Cap (W)        | 920      | 1200     | 1480     | 1920     | 2130     |
|                              |                  | Input (KW)     | 1.19     | 1.26     | 1.58     | 2.03     | 2.8      |
| Pipe                         | Gas In (mm)      | Cap (W)        | 590      | 770      | 980      | 1300     | 1500     |
|                              |                  | Input (KW)     | 0.97     | 1.01     | 1.27     | 1.67     | 1.88     |
|                              | Liquid dia. (mm) | 2.3            | 2.8      | 3.32     | 3.84     | 4.94     | 5.94     |
| Overall Size                 | A (mm)           | 620            | 620      | 620      | 960      | 960      | 1060     |
|                              | B (mm)           | 650            | 650      | 650      | 680      | 680      | 680      |
|                              | C (mm)           | 510            | 560      | 560      | 460      | 510      | 620      |
| Installation size (A×B) (mm) |                  | 580×350        | 580×350  | 580×350  | 920×380  | 920×380  | 1020×380 |

| Model                        |                  | JZBF05LY       | JZBF06LY | JZBF09LY | JZBF12LY | JZBF14LY |
|------------------------------|------------------|----------------|----------|----------|----------|----------|
| Comp model                   |                  | 4DES-5Y        | 4CES-6Y  | 4TES-9Y  | 4PES-12Y | 4NES-14Y |
| Temperature ( °C)            |                  | -15°C ~30 °C   |          |          |          |          |
| Power supply                 |                  | 380V/3Ph/50 HZ |          |          |          |          |
| Condenser                    | Fan Qty          | 2              | 2        | 2        | 2        | 4        |
|                              | Voltage (V)      | 380            | 380      | 380      | 380      | 380      |
|                              | Input (W)        | 180×2          | 180×2    | 250×2    | 250×2    | 180×4    |
| Comp Cap. & Input            | Te<br>-25°C      | Cap (W)        | 5900     | 7040     | 8620     | 9500     |
|                              |                  | Input (KW)     | 4.55     | 5.36     | 6.35     | 6.88     |
|                              | Te<br>-30°C      | Cap (W)        | 4400     | 5220     | 6310     | 6830     |
|                              |                  | Input (KW)     | 3.94     | 4.61     | 5.38     | 5.74     |
|                              | Te<br>-35°C      | Cap (W)        | 3200     | 3760     | 4460     | 4710     |
|                              |                  | Input (KW)     | 3.34     | 3.89     | 4.46     | 4.64     |
| Pipe                         | Te<br>-40°C      | Cap (W)        | 2250     | 2610     | 3000     | 3060     |
|                              |                  | Input (KW)     | 2.76     | 3.2      | 3.61     | 3.62     |
|                              | Liquid dia. (mm) | 4.72           | 5.94     | 6.88     | 8.58     | 11700    |
| Overall Size                 | A (mm)           | 1060           | 1300     | 1280     | 1280     | 1280     |
|                              | B (mm)           | 680            | 750      | 710      | 710      | 750      |
|                              | C (mm)           | 720            | 670      | 910      | 910      | 1210     |
| Installation size (A×B) (mm) |                  | 1020×380       | 1260×410 | 1000×665 | 1000×665 | 1000×705 |

| Model                        |                  |            | JZBF18LY       | JZBF23LY | JZBF28LY | JZBF34LY | JZBF44LY |
|------------------------------|------------------|------------|----------------|----------|----------|----------|----------|
| Comp model                   |                  |            | 4HE-18Y        | 4GE-23Y  | 6HE-28Y  | 6GE-34Y  | 6FE-44Y  |
| Temperature ( °C)            |                  |            | -15℃ ~30 °C    |          |          |          |          |
| Power supply                 |                  |            | 380V/3Ph/50 HZ |          |          |          |          |
| Condenser                    | Fan Qty          |            | 4              | 4        | 4        | 2        | 2        |
|                              | Voltage (V)      |            | 380            | 380      | 380      | 380      | 380      |
|                              | Input (W)        |            | 180×4          | 180×4    | 180×4    | 780×2    | 780×2    |
| Comp Cap. & Input            | Te<br>-25℃       | Cap (W)    | 16690          | 19670    | 24600    | 29700    | 35300    |
|                              |                  | Input (KW) | 12.0           | 14.27    | 17.69    | 21.8     | 26.2     |
|                              | Te<br>-30℃       | Cap (W)    | 12450          | 14820    | 18340    | 22600    | 26600    |
|                              |                  | Input (KW) | 10.35          | 12.33    | 15.2     | 18.95    | 22.7     |
|                              | Te<br>-35℃       | Cap (W)    | 9000           | 10870    | 13260    | 16680    | 19460    |
|                              |                  | Input (KW) | 8.75           | 10.46    | 12.75    | 16.19    | 19.35    |
|                              | Te<br>-40℃       | Cap (W)    | 6220           | 7690     | 9170     | 11910    | 13610    |
|                              |                  | Input (KW) | 7.23           | 8.71     | 10.4     | 13.56    | 16.07    |
| Pipe                         | Gas In (mm)      |            | φ 42           | φ 54     | φ 54     | φ 54     | φ 54     |
|                              | Liquid dia. (mm) |            | φ 22           | φ 22     | φ 22     | φ 22     | φ 28     |
| Overall Size                 |                  | A (mm)     | 1280           | 1350     | 1350     | 1150     | 1050     |
|                              |                  | B (mm)     | 800            | 850      | 850      | 570      | 600      |
|                              |                  | C (mm)     | 1460           | 1410     | 1410     | 1000     | 1050     |
| Installation size (A×B) (mm) |                  |            | 1000×755       | 1000×805 | 1000×805 | 800×525  | 800×555  |
| Condenser Size               |                  | A (mm)     | ---            | ---      | ---      | 1840     | 1840     |
|                              |                  | B (mm)     | ---            | ---      | ---      | 980      | 980      |
|                              |                  | C (mm)     | ---            | ---      | ---      | 1100     | 1100     |

Remark : 1) Condensing temp. 45 °C; 2) Condenser will be separately installed for condensing units Cap. > 34Hp.

#### 4.2 Water cooled

4.2.1 Water cooled Medium Temp. (Applicable for Te -5°C~20°C) :

4.2.1.1 Refrigerant R22 :

| Model                        |                  |            | JZBS03M        | JZBS03M | JZBS03M | JZBS04M | JZBS05M | JZBS06M |
|------------------------------|------------------|------------|----------------|---------|---------|---------|---------|---------|
| Comp model                   |                  |            | 2FES-3         | 2EES-3  | 2DES-3  | 2CES-4  | 4FES-5  | 4EES-6  |
| Temperature ( °C)            |                  |            | -10℃ ~5 °C     |         |         |         |         |         |
| Power supply                 |                  |            | 380V/3Ph/50 HZ |         |         |         |         |         |
| Comp Cap. & Input            | Te<br>-5℃        | Cap (W)    | 5650           | 7050    | 8410    | 10340   | 11900   | 10490   |
|                              |                  | Input (KW) | 1.98           | 2.32    | 2.77    | 3.39    | 3.6     | 4.58    |
|                              | Te<br>-10℃       | Cap (W)    | 4590           | 5700    | 6810    | 8390    | 8940    | 11380   |
|                              |                  | Input (KW) | 1.88           | 2.18    | 2.6     | 3.19    | 3.37    | 4.29    |
|                              | Te<br>-15℃       | Cap (W)    | 3690           | 4540    | 5440    | 6730    | 7110    | 9060    |
|                              |                  | Input (KW) | 1.75           | 2.01    | 2.4     | 2.95    | 3.1     | 3.94    |
| Cooling Water (m³/h)         |                  |            | 1.8            | 2.0     | 2.5     | 3.0     | 3.2     | 4.1     |
| Pipe                         | Gas In (mm)      |            | φ 16           | φ 22    | φ 22    | φ 22    | φ 22    | φ 28    |
|                              | Liquid dia. (mm) |            | φ 12           | φ 12    | φ 12    | φ 12    | φ 12    | φ 12    |
|                              | Water Pipe(inch) |            | 1-1/4 "        | 1-1/4 " | 1-1/4 " | 1-1/4 " | 1-1/4 " | 1-1/4 " |
|                              |                  |            |                |         |         |         |         |         |
| Overall Size                 |                  | A (mm)     | 745            | 745     | 745     | 935     | 1085    | 1085    |
|                              |                  | B (mm)     | 350            | 350     | 350     | 370     | 370     | 370     |
|                              |                  | C (mm)     | 515            | 555     | 555     | 625     | 665     | 665     |
| Installation size (A×B) (mm) |                  |            | 510×290        | 510×290 | 510×290 | 600×320 | 710×320 | 710×320 |

| Model                        |                  |            | JZBS07M        | JZBS09M | JZBS12M | JZBS15M | JZBS20M |
|------------------------------|------------------|------------|----------------|---------|---------|---------|---------|
| Comp model                   |                  |            | 4DES-7         | 4CES-9  | 4TES-12 | 4PES-15 | 4NES-20 |
| Temperature ( °C)            |                  |            | -10℃ ~5 °C     |         |         |         |         |
| Power supply                 |                  |            | 380V/3Ph/50 HZ |         |         |         |         |
| Comp Cap. & Input            | Te<br>-5℃        | Cap (W)    | 16810          | 20700   | 26900   | 30900   | 36400   |
|                              |                  | Input (KW) | 5.42           | 6.71    | 8.31    | 9.49    | 11.12   |
|                              | Te<br>-10℃       | Cap (W)    | 13610          | 16770   | 21700   | 24800   | 29300   |
|                              |                  | Input (KW) | 5.09           | 6.3     | 7.73    | 8.79    | 10.34   |
|                              | Te<br>-15℃       | Cap (W)    | 10860          | 13440   | 17210   | 19540   | 23200   |
|                              |                  | Input (KW) | 4.69           | 5.82    | 7.07    | 8.0     | 9.45    |
| Cooling Water (m³/h)         |                  |            | 5.0            | 6.0     | 8.0     | 9.0     | 10.3    |
| Pipe                         | Gas In (mm)      |            | φ 28           | φ 28    | φ 35    | φ 42    | φ 42    |
|                              | Liquid dia. (mm) |            | φ 16           | φ 16    | φ 16    | φ 16    | φ 22    |
|                              | Water Pipe(inch) |            | 1-1/2 "        | 1-1/2 " | 1-1/2 " | 1-1/2 " | 2-1/2 " |
| Overall Size                 |                  | A (mm)     | 1255           | 1255    | 1295    | 1295    | 1295    |
|                              |                  | B (mm)     | 410            | 410     | 480     | 480     | 525     |
|                              |                  | C (mm)     | 670            | 670     | 770     | 770     | 770     |
| Installation size (A×B) (mm) |                  |            | 800×320        | 800×320 | 850×390 | 850×390 | 850×390 |

| Model                           |                  |            | JZBS25M        | JZBS30M | JZBS35M  | JZBS40M  | JZBS50M  |
|---------------------------------|------------------|------------|----------------|---------|----------|----------|----------|
| Comp model                      |                  |            | 4HE-25         | 4GE -30 | 6HE-35   | 6GE -40  | 6FE-50   |
| Temperature ( °C)               |                  |            | -10℃ ~5 °C     |         |          |          |          |
| Power supply                    |                  |            | 380V/3Ph/50 HZ |         |          |          |          |
| Comp Cap. & Input               | Te<br>-5℃        | Cap (W)    | 48400          | 56100   | 72700    | 83400    | 100400   |
|                                 |                  | Input (KW) | 14.89          | 17.14   | 22.4     | 25.7     | 31.3     |
|                                 | Te<br>-10℃       | Cap (W)    | 39100          | 45400   | 58600    | 67300    | 81100    |
|                                 |                  | Input (KW) | 13.88          | 16.01   | 20.9     | 24.0     | 29.2     |
|                                 | Te<br>-15℃       | Cap (W)    | 31100          | 36200   | 46600    | 53500    | 64600    |
|                                 |                  | Input (KW) | 12.73          | 14.71   | 19.12    | 22.0     | 26.9     |
| Cooling Water (m³/h)            |                  |            | 14             | 16      | 19       | 24       | 29       |
| Pipe                            | Gas In (mm)      |            | φ 54           | φ 54    | φ 54     | φ 54     | φ 54     |
|                                 | Liquid dia. (mm) |            | φ 22           | φ 22    | φ 28     | φ 28     | φ 28     |
|                                 | Water Pipe(inch) |            | 2-1/2 "        | 2-1/2 " | 2-1/2 "  | 2-1/2 "  | 3 "      |
| Overall Size                    |                  | A (mm)     | 1295           | 1295    | 1650     | 1650     | 2095     |
|                                 |                  | B (mm)     | 565            | 565     | 600      | 600      | 600      |
|                                 |                  | C (mm)     | 840            | 840     | 830      | 830      | 830      |
| Installation size<br>(A×B) (mm) |                  |            | 850×390        | 850×390 | 1200×390 | 1200×390 | 1200×390 |

Condensing Temp. 40 °C



4.2.1.2 Refrigerant R404A/R507A :

| Model                           |                  |            | JZBS02MY       | JZBS02MY | JZBS02MY | JZBS03MY | JZBS03MY | JZBS04MY |
|---------------------------------|------------------|------------|----------------|----------|----------|----------|----------|----------|
| Comp model                      |                  |            | 2FES-2Y        | 2EES-2Y  | 2DES-2Y  | 2CES-3Y  | 4FES-3Y  | 4EES-4Y  |
| Temperature ( °C)               |                  |            | -10℃ ~5 °C     |          |          |          |          |          |
| Power supply                    |                  |            | 380V/3Ph/50 HZ |          |          |          |          |          |
| Comp C ap.& Input               | Te<br>-5℃        | Cap (W)    | 5640           | 7260     | 8670     | 10670    | 11600    | 14710    |
|                                 |                  | Input (KW) | 2.27           | 2.64     | 3.22     | 3.92     | 4.23     | 5.42     |
|                                 | Te<br>-10℃       | Cap (W)    | 4520           | 5830     | 6980     | 8620     | 9300     | 11800    |
|                                 |                  | Input (KW) | 2.13           | 2.45     | 2.98     | 3.65     | 3.96     | 5.06     |
|                                 | Te<br>-15℃       | Cap (W)    | 3580           | 4620     | 5550     | 6880     | 7370     | 9360     |
|                                 |                  | Input (KW) | 1.97           | 2.23     | 2.73     | 3.35     | 3.66     | 4.65     |
| Cooling Water (m³/h)            |                  |            | 1.8            | 2.2      | 2.7      | 3.3      | 3.5      | 4.5      |
| Pipe                            | Gas In (mm)      |            | φ 16           | φ 22     | φ 22     | φ 22     | φ 22     | φ 28     |
|                                 | Liquid dia. (mm) |            | φ 12           | φ 12     | φ 12     | φ 12     | φ 12     | φ 12     |
|                                 | Water Pipe(inch) |            | 1-1/4 "        | 1-1/4 "  | 1-1/4 "  | 1-1/4 "  | 1-1/4 "  | 1-1/4 "  |
| Overall Size                    |                  | A (mm)     | 745            | 745      | 745      | 935      | 1085     | 1085     |
|                                 |                  | B (mm)     | 350            | 350      | 350      | 370      | 370      | 370      |
|                                 |                  | C (mm)     | 515            | 555      | 555      | 625      | 665      | 665      |
| Installation size<br>(A×B) (mm) |                  |            | 510×290        | 510×290  | 510×290  | 600×320  | 710×320  | 710×320  |

| Model                           |                  |            | JZBS05MY       | JZBS06MY | JZBS09MY | JZBS12MY | JZBS14MY |
|---------------------------------|------------------|------------|----------------|----------|----------|----------|----------|
| Comp model                      |                  |            | 4DES-5Y        | 4CES-6Y  | 4TES-9Y  | 4PES-12Y | 4NES-14Y |
| Temperature ( °C)               |                  |            | -10℃ ~5 °℃     |          |          |          |          |
| Power supply                    |                  |            | 380V/3Ph/50 HZ |          |          |          |          |
| Comp Cap. & Input               | Te<br>-5℃        | Cap (W)    | 17530          | 21200    | 26900    | 30900    | 36700    |
|                                 |                  | Input (KW) | 6.4            | 7.66     | 9.6      | 10.72    | 12.91    |
|                                 | Te<br>-10℃       | Cap (W)    | 14070          | 17000    | 21500    | 24500    | 29200    |
|                                 |                  | Input (KW) | 5.97           | 7.14     | 8.83     | 9.85     | 11.93    |
|                                 | Te<br>-15℃       | Cap (W)    | 11160          | 13450    | 16890    | 19160    | 23000    |
|                                 |                  | Cap (W)    | 5.49           | 6.54     | 7.99     | 8.88     | 10.84    |
| Cooling Water (m³/h)            |                  |            | 5.4            | 6.5      | 8.2      | 9.5      | 11.1     |
| Pipe                            | Gas In (mm)      |            | φ 28           | φ 28     | φ 35     | φ 35     | φ 35     |
|                                 | Liquid dia. (mm) |            | φ 16           | φ 16     | φ 16     | φ 16     | φ 22     |
|                                 | Water Pipe(inch) |            | 1-1/2 "        | 1-1/2 "  | 1-1/2 "  | 1-1/2 "  | 2-1/2 "  |
| Overall Size                    |                  | A (mm)     | 1255           | 1255     | 1295     | 1295     | 1295     |
|                                 |                  | B (mm)     | 410            | 410      | 480      | 480      | 525      |
|                                 |                  | C (mm)     | 670            | 670      | 770      | 770      | 770      |
| Installation size<br>(A×B) (mm) |                  |            | 800×320        | 800×320  | 850×390  | 850×390  | 850×390  |

| Model                           |                  |            | JZBS18MY       | JZBS23MY | JZBS28MY | JZBS34MY | JZBS44MY |
|---------------------------------|------------------|------------|----------------|----------|----------|----------|----------|
| Comp model                      |                  |            | 4HE-18Y        | 4GE -23Y | 6HE-28Y  | 6GE -34Y | 6FE-44Y  |
| Temperature ( °C)               |                  |            | -10℃ ~5 °℃     |          |          |          |          |
| Power supply                    |                  |            | 380V/3Ph/50 HZ |          |          |          |          |
| Comp Cap. & Input               | Te<br>-5℃        | Cap (W)    | 48900          | 56500    | 71800    | 83200    | 100000   |
|                                 |                  | Input (KW) | 17.36          | 20.7     | 25.5     | 30.7     | 36.8     |
|                                 | Te<br>-10℃       | Cap (W)    | 39500          | 45700    | 58000    | 67500    | 81100    |
|                                 |                  | Input (KW) | 16.08          | 19.13    | 23.6     | 28.5     | 34.3     |
|                                 | Te<br>-15℃       | Cap (W)    | 31400          | 36500    | 46200    | 54200    | 65000    |
|                                 |                  | Cap (W)    | 14.69          | 17.44    | 21.6     | 26.1     | 31.6     |
| Cooling Water (m³/h)            |                  |            | 15             | 17.3     | 20.5     | 25.5     | 30.8     |
| Pipe                            | Gas In (mm)      |            | φ42            | φ54      | φ54      | φ54      | φ54      |
|                                 | Liquid dia. (mm) |            | φ22            | φ22      | φ28      | φ28      | φ28      |
|                                 | Water Pipe(inch) |            | 2-1/2 "        | 2-1/2 "  | 2-1/2 "  | 2-1/2 "  | 2-1/2 "  |
| Overall Size                    |                  | A (mm)     | 1295           | 1295     | 1650     | 1650     | 2095     |
|                                 |                  | B (mm)     | 565            | 565      | 600      | 600      | 600      |
|                                 |                  | C (mm)     | 840            | 840      | 830      | 830      | 830      |
| Installation size<br>(A×B) (mm) |                  |            | 850×390        | 850×390  | 1200×390 | 1200×390 | 1200×390 |

Condensing Temp. 40 °C

#### 4.2.2 Water cooled low Temp. (Te -20~40°C) :

##### 4.2.2.1 Refrigerant R404A/R507A

| Model                           |                  |            | JZBS03LY       | JZBS03LY | JZBS04LY | JZBS05LY | JZBS06LY | JZBS09LY |
|---------------------------------|------------------|------------|----------------|----------|----------|----------|----------|----------|
| Comp model                      |                  |            | 2CES-3Y        | 4FES-3Y  | 4EES-4Y  | 4DES-5Y  | 4CES-6Y  | 4TES-9Y  |
| Temperature ( °C)               |                  |            | -15℃ ~30 °C    |          |          |          |          |          |
| Power supply                    |                  |            | 380V/3Ph/50 HZ |          |          |          |          |          |
| Comp Cap. & Input               | Te<br>-25℃       | Cap (W)    | 4170           | 4440     | 5640     | 6730     | 8050     | 9940     |
|                                 |                  | Input (KW) | 2.7            | 2.97     | 3.73     | 4.42     | 5.22     | 6.2      |
|                                 | Te<br>-30℃       | Cap (W)    | 3140           | 3360     | 4260     | 5080     | 6040     | 7370     |
|                                 |                  | Input (KW) | 2.36           | 2.61     | 3.25     | 3.86     | 4.54     | 5.3      |
|                                 | Te<br>-35℃       | Cap (W)    | 2280           | 2480     | 3140     | 3740     | 4420     | 5300     |
|                                 |                  | Input (KW) | 2.02           | 2.24     | 2.77     | 3.3      | 3.86     | 4.44     |
|                                 | Te<br>-40℃       | Cap (W)    | 1580           | 1780     | 2240     | 2670     | 3120     | 3660     |
|                                 |                  | Input (KW) | 1.69           | 1.89     | 2.31     | 2.76     | 3.21     | 3.63     |
| Cooling Water (m³/h)            |                  |            | 1.5            | 1.6      | 2.0      | 2.5      | 3.0      | 4.0      |
| Pipe                            | Gas In (mm)      |            | φ22            | φ22      | φ28      | φ28      | φ28      | φ35      |
|                                 | Liquid dia. (mm) |            | φ12            | φ12      | φ12      | φ12      | φ12      | φ16      |
|                                 | Water Pipe(inch) |            | 1-1/4 "        | 1-1/4 "  | 1-1/4 "  | 1-1/4 "  | 1-1/4 "  | 1-1/2 "  |
| Overall Size                    |                  | A (mm)     | 745            | 745      | 745      | 935      | 935      | 1140     |
|                                 |                  | B (mm)     | 350            | 350      | 350      | 370      | 370      | 380      |
|                                 |                  | C (mm)     | 555            | 610      | 610      | 670      | 670      | 715      |
| Installation size<br>(A×B) (mm) |                  |            | 510×290        | 510×290  | 510×290  | 600×320  | 600×320  | 710×320  |

| Model                           |                  |            | JZBS12LY       | JZBS14LY | JZBS18LY | JZBS23LY | JZBS28LY | JZBS34LY | JZBS44LY |
|---------------------------------|------------------|------------|----------------|----------|----------|----------|----------|----------|----------|
| Comp model                      |                  |            | 4PES-12Y       | 4NES-14Y | 4HE-18Y  | 4GE-23Y  | 6HE-28Y  | 6GE-34Y  | 6FE-44Y  |
| Temperature ( °C)               |                  |            | -15℃ ~30 ℃     |          |          |          |          |          |          |
| Power supply                    |                  |            | 380V/3Ph/50 HZ |          |          |          |          |          |          |
| Comp Cap. & Input               | Te<br>-25℃       | Cap (W)    | 11060          | 13520    | 19050    | 22400    | 28000    | 33600    | 40100    |
|                                 |                  | Input (KW) | 6.81           | 8.45     | 11.72    | 13.88    | 17.25    | 21.1     | 25.5     |
|                                 | Te<br>-30℃       | Cap (W)    | 8090           | 10030    | 14380    | 17020    | 21200    | 25800    | 30500    |
|                                 |                  | Input (KW) | 5.76           | 7.23     | 10.2     | 12.09    | 14.97    | 18.46    | 22.4     |
|                                 | Te<br>-35℃       | Cap (W)    | 5710           | 7220     | 10550    | 12620    | 15570    | 19290    | 22700    |
|                                 |                  | Input (KW) | 4.74           | 6.03     | 8.71     | 10.34    | 12.71    | 15.91    | 19.26    |
|                                 | Te<br>-40℃       | Cap (W)    | 3830           | 4980     | 7440     | 9050     | 11000    | 13990    | 16190    |
|                                 |                  | Input (KW) | 3.77           | 4.88     | 7.28     | 8.68     | 10.51    | 13.46    | 16.19    |
| Cooling Water (m³/h)            |                  |            | 4.0            | 5.0      | 7.0      | 8.0      | 10.0     | 12.0     | 15       |
| Pipe                            | Gas In (mm)      |            | φ 35           | φ 35     | φ 42     | φ 54     | φ 54     | φ 54     | φ 54     |
|                                 | Liquid dia. (mm) |            | φ 16           | φ 16     | φ 22     | φ 22     | φ 22     | φ 22     | φ 28     |
|                                 | Water Pipe(inch) |            | 1-1/2 "        | 1-1/2 "  | 1-1/2 "  | 1-1/2 "  | 2-1/2 "  | 2-1/2 "  | 2-1/2 "  |
|                                 |                  |            |                |          |          |          |          |          |          |
| Overall Size                    |                  | A (mm)     | 1255           | 1255     | 1295     | 1295     | 1295     | 1295     | 1650     |
|                                 |                  | B (mm)     | 415            | 415      | 585      | 565      | 595      | 595      | 600      |
|                                 |                  | C (mm)     | 715            | 715      | 835      | 840      | 830      | 830      | 830      |
| Installation size<br>(A×B) (mm) |                  |            | 800×320        | 800×320  | 850×390  | 850×390  | 850×390  | 850×390  | 1200×390 |

Condensing Temp. 40 ℃

## 5. Diagrams for Overall sizes

### 5.1 Air Cooled

JZBF02M...JZBF07M

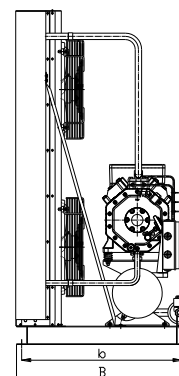
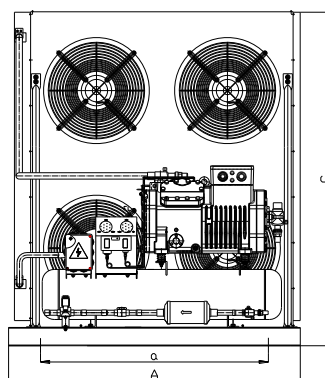
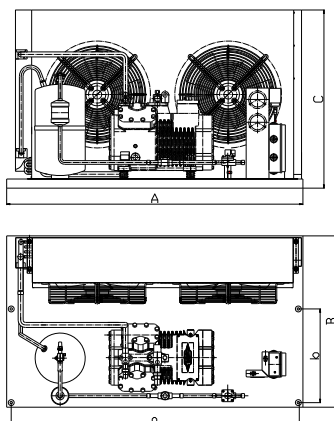
JZBF02MY...JZBF05MY

JZBF02LY...JZBF06LY

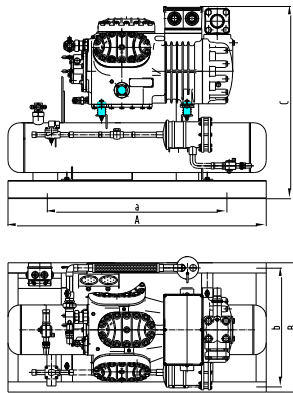
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JZBF06MY...JZBF14MY

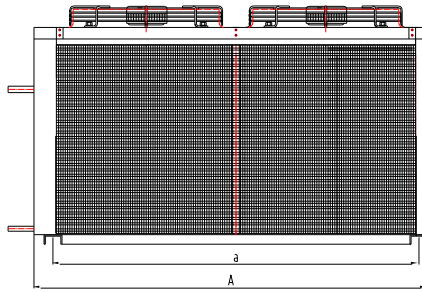
JZBF09LY...JZBF28LY



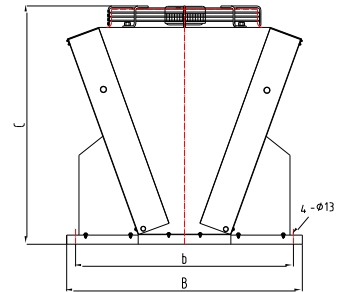
JZBF25M...JZBF50M.JZBF18MY...JZBF44MY JZBF34LY...JZBF44LY



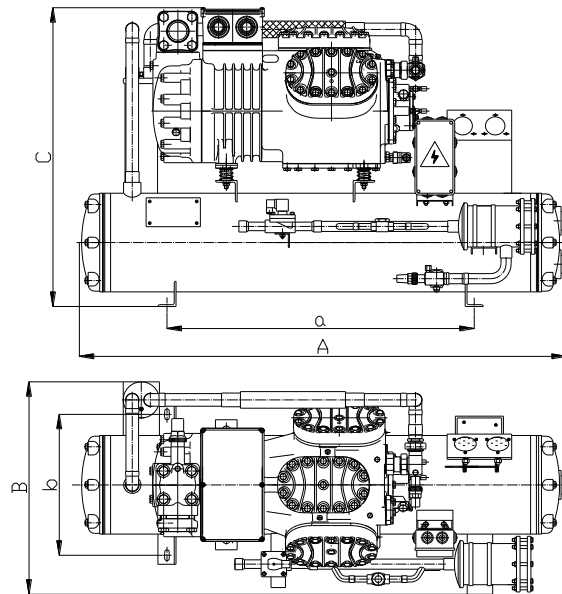
Condensing Unit



Evaporator



## 5.2 Water Cooled



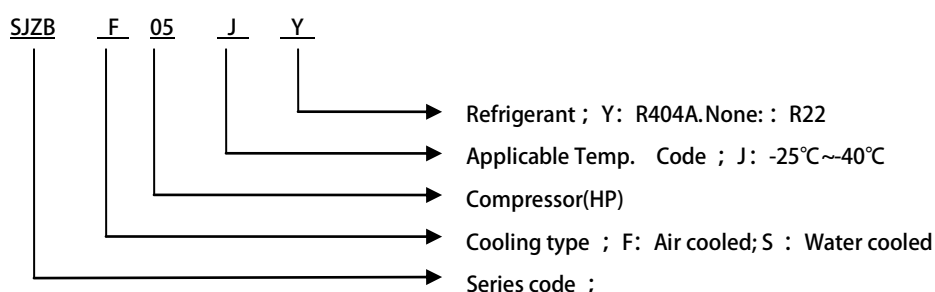


## SJZB Series Semi-hermetic 2 Stage Condensing Units

### 1. Product description

- ◆ With Bitzer semi-hermetic, two stage compressor
- ◆ With world famous refrigerant components
- ◆ With mid stage design to greatly improve EER value.
- ◆ With lower evaporative temp. Min. evaporate temp can be -50°C when system with R22 refrigerant, Min. evaporate temp can be -65°C when system with R404A refrigerant..

### 2. Model code



### 3. Main components

●Twistage Compressor ●Crankcase heater ●Vibration eliminator ●Oil separator ●Condenser ●Receiver (Water cooled units without receiver) ● Filter ●Sight glasses ●Solenoid valve ●Subcooler ●Gas separator ● H&L Pressure controller ●Oil pressure difference controller ●H/L Pressure gauge ● Medium pressure gauge

### 4. Specifications:

#### 4.1 2-stage air cooled condensing units

##### 4.1.1 Refrigerant R22

| Model                     |                  | SJZBF05J      | SJZBF08J | SJZBF12J  | SJZBF16J  | SJZBF20J  | SJZBF25J  | SJZBF30J |
|---------------------------|------------------|---------------|----------|-----------|-----------|-----------|-----------|----------|
| Temp (°C)                 |                  | -25°C~-40°C   |          |           |           |           |           |          |
| Power                     |                  | 380V/3Ph/50HZ |          |           |           |           |           |          |
| Compressor                |                  | S4T5.2        | S4N8.2   | S4G12.2   | S6J16.2   | S6H20.2   | S6G25.2   | S6F30.2  |
| Condenser                 | Fan Qty          | 2             | 2        | 4         | 4         | 4         | 4         | 2        |
|                           | Fan Voltage(V)   | 380           | 380      | 380       | 380       | 380       | 380       | 380      |
|                           | Fan Watt(W)      | 180×2         | 180×2    | 180×4     | 180×4     | 180×4     | 180×4     | 800×2    |
| Comp Cap. & Input         | Te. -35°C        | Cap (W)       | 5010     | 7240      | 10930     | 16320     | 18920     | 21700    |
|                           |                  | Input (KW)    | 3.75     | 5.6       | 8.46      | 11.97     | 13.87     | 15.92    |
|                           | Te. -40°C        | Cap (W)       | 3950     | 5680      | 8580      | 12920     | 14980     | 17200    |
|                           |                  | Input (KW)    | 3.41     | 5.08      | 7.68      | 10.58     | 12.26     | 14.07    |
|                           | Te. -45°C        | Cap (W)       | 3020     | 4310      | 6510      | 9810      | 11370     | 13060    |
|                           |                  | Input (KW)    | 3.04     | 4.56      | 6.89      | 9.17      | 10.63     | 12.2     |
| Pipe                      | Gas In (mm)      | φ28           | φ28      | φ35       | φ42       | φ42       | φ42       | φ42      |
|                           | Liquid dia. (mm) | φ16           | φ16      | φ22       | φ22       | φ22       | φ22       | φ22      |
| Overall sizes             | A(mm)            |               | 1085     | 1270      | 1270      | 1270      | 1340      | 1340     |
|                           | B(mm)            |               | 930      | 930       | 1050      | 1050      | 1110      | 1130     |
|                           | C(mm)            |               | 660      | 810       | 1210      | 1460      | 1410      | 1410     |
| Installation size(a×b mm) |                  | 800×885       | 800×885  | 1000×1005 | 1000×1005 | 1000×1065 | 1000×1085 | 910×685  |

Remark : 1) Condensing Temp. is 45°C;

2) For 30Hp condensing units, condenser is separately installed. the size of condenser is not include in above sheet.

#### 4.1.2 Refrigerant R404A

| Model                     |                  | SJZBF05JY     | SJZBF08JY | SJZBF12JY | SJZBF16JY | SJZBF20JY | SJZBF25JY | SJZBF30JY |
|---------------------------|------------------|---------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Temp ( °C)                |                  | -25°C~-40°C   |           |           |           |           |           |           |
| Power                     |                  | 380V/3Ph/50HZ |           |           |           |           |           |           |
| Compressor                |                  | S4T5.2Y       | S4N8.2Y   | S4G12.2Y  | S6J16.2Y  | S6H20.2Y  | S6G25.2Y  | S6F30.2Y  |
| Condenser                 | Fan Qty          | 2             | 2         | 4         | 4         | 4         | 4         | 2         |
|                           | Fan Voltage(V)   | 380           | 380       | 380       | 380       | 380       | 380       | 380       |
|                           | Fan Watt(W)      | 180×2         | 180×2     | 180×4     | 180×4     | 180×4     | 180×4     | 800×2     |
| Comp Cap. & Input         | Te.              | Cap (W)       | 5650      | 8010      | 12540     | 17480     | 20100     | 23000     |
|                           | -35°C            | Input (KW)    | 4.59      | 6.56      | 9.9       | 13.96     | 16.17     | 18.56     |
|                           | Te.              | Cap (W)       | 4550      | 6460      | 10260     | 14380     | 16580     | 18920     |
|                           | -40°C            | Input (KW)    | 4.17      | 5.95      | 8.96      | 12.56     | 14.55     | 16.7      |
|                           | Te.              | Cap (W)       | 3600      | 5130      | 8260      | 11640     | 13430     | 15340     |
|                           | -45°C            | Input (KW)    | 3.73      | 5.33      | 8         | 11.21     | 12.99     | 14.92     |
| Pipe                      | Gas In (mm)      |               | φ28       | φ28       | φ35       | φ42       | φ42       | φ42       |
|                           | Liquid dia. (mm) |               | φ16       | φ16       | φ22       | φ22       | φ22       | φ22       |
| Overall sizes             | A(mm)            |               | 1085      | 1270      | 1270      | 1270      | 1340      | 1340      |
|                           | B(mm)            |               | 930       | 930       | 1050      | 1050      | 1110      | 1130      |
|                           | C(mm)            |               | 660       | 810       | 1210      | 1460      | 1410      | 1410      |
| Installation size(a×b mm) |                  | 800×885       | 800×885   | 1000×1005 | 1000×1005 | 1000×1065 | 1000×1085 | 910×685   |

Remark: For 30Hp condensing units, condenser is separately installed. the size of condenser is not include in above sheet.

#### 4.2 2-strage water cooled condensing units

##### 4.2.1 Refrigerant R22

| Model                     |                      | SJZBS05J        | SJZBS08J | SJZBS12J | SJZBS16J | SJZBS20J | SJZBS25J | SJZBS30J |
|---------------------------|----------------------|-----------------|----------|----------|----------|----------|----------|----------|
| Temp ( °C)                |                      | -25°C~-40°C     |          |          |          |          |          |          |
| Power                     |                      | 380V/50HZ       |          |          |          |          |          |          |
| Compressor                |                      | S4T-5.2         | S4N-8.2  | S4G-12.2 | S6J-16.2 | S6H-20.2 | S6G-25.2 | S6F-30.2 |
| Condenser                 | Type                 | Shell Tube Type |          |          |          |          |          |          |
|                           | Cooling Water (m³/h) | 2               | 3        | 4        | 5.6      | 6.6      | 7.5      | 10       |
|                           | Water Pipe           | 1-1/4"          | 1-1/2"   | 1-1/2"   | 2-1/2 "  | 2-1/2 "  | 2-1/2 "  | 2- 1/2"  |
| Comp Cap. & Input         | Te.                  | Cap (W)         | 5100     | 7380     | 11150    | 16490    | 19120    | 21900    |
|                           | -35°C                | Input (KW)      | 3.55     | 5.3      | 8.0      | 11.35    | 13.2     | 15.1     |
|                           | Te.                  | Cap (W)         | 4010     | 5810     | 8780     | 13090    | 15170    | 17420    |
|                           | -40°C                | Input (KW)      | 3.23     | 4.81     | 7.26     | 10.1     | 11.67    | 13.4     |
|                           | Te.                  | Cap (W)         | 3080     | 4440     | 6700     | 1000     | 11600    | 13310    |
|                           | -45°C                | Input (KW)      | 2.88     | 4.33     | 6.54     | 8.8      | 10.2     | 11.7     |
| Pipe                      | Gas In (mm)          |                 | φ28      | φ28      | φ35      | φ42      | φ42      | φ42      |
|                           | Liquid dia. (mm)     |                 | Φ16      | Φ16      | φ22      | φ22      | φ22      | φ22      |
| Overall sizes             | A(mm)                |                 | 900      | 1050     | 1260     | 1300     | 1300     | 1300     |
|                           | B(mm)                |                 | 650      | 650      | 720      | 720      | 720      | 720      |
|                           | C(mm)                |                 | 795      | 855      | 950      | 990      | 990      | 990      |
| Installation size(a×b mm) |                      | 500×605         | 650×605  | 800×675  | 880×675  | 880×675  | 880×675  | 880×675  |

Condensin g Temp. is 45 °C ;

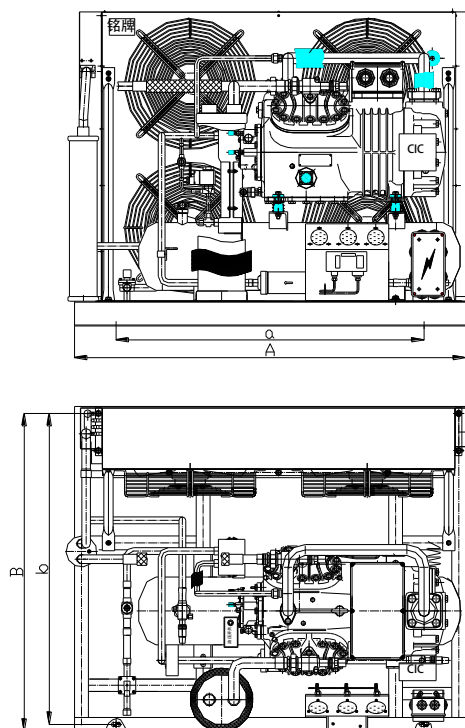
#### 4.2.2 Refrigerant R404A/R507A

| Model                     |                      | SJZBS05JY                     | SJZBS08JY | SJZBS12JY | SJZBS16JY | SJZBS20JY | SJZBS25JY | SJZBS30JY |
|---------------------------|----------------------|-------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Temp (°C)                 |                      | -25°C~-40°C                   |           |           |           |           |           |           |
| Power                     |                      | 380V/50HZ                     |           |           |           |           |           |           |
| Compressor                |                      | S4T-5.2Y                      | S4N-8.2Y  | S4G-12.2Y | S6J-16.2Y | S6H-20.2Y | S6G-25.2Y | S6F-30.2Y |
| Condenser                 | Type                 | High Efficient Pipe and Shell |           |           |           |           |           |           |
|                           | Cooling Water (m³/h) | 2                             | 3         | 4         | 5.6       | 6.6       | 7.5       | 10        |
|                           | Water Pipe           | 1-1/4"                        | 1-1/2"    | 1-1/2"    | 2-1/2 "   | 2-1/2 "   | 2-1/2 "   | 2- 1/2"   |
| Comp Cap. & Input         | Te. -35°C            | Cap (W)                       | 5800      | 8220      | 12930     | 17990     | 20800     | 23700     |
|                           |                      | Input (KW)                    | 4.36      | 6.22      | 9.37      | 13.21     | 15.32     | 17.59     |
|                           | Te. -40°C            | Cap (W)                       | 4670      | 6640      | 10580     | 14810     | 17090     | 19520     |
|                           |                      | Input (KW)                    | 3.96      | 5.65      | 8.49      | 11.9      | 13.79     | 15.85     |
|                           | Te. -45°C            | Cap (W)                       | 3710      | 5290      | 8520      | 12000     | 13850     | 15830     |
|                           |                      | Input (KW)                    | 3.55      | 5.07      | 7.6       | 10.63     | 12.32     | 14.16     |
| Pipe                      | Gas In (mm)          |                               | φ28       | φ28       | φ35       | φ42       | φ42       | φ42       |
|                           | Liquid dia. (mm)     |                               | φ16       | φ16       | φ22       | φ22       | φ22       | φ22       |
| Overall sizes             |                      | A(mm)                         | 900       | 1050      | 1260      | 1300      | 1300      | 1300      |
|                           |                      | B(mm)                         | 650       | 650       | 720       | 720       | 720       | 720       |
|                           |                      | C(mm)                         | 795       | 855       | 950       | 990       | 990       | 990       |
| Installation size(a×b mm) |                      | 500×605                       | 650×605   | 800×675   | 880×675   | 880×675   | 880×675   | 880×675   |

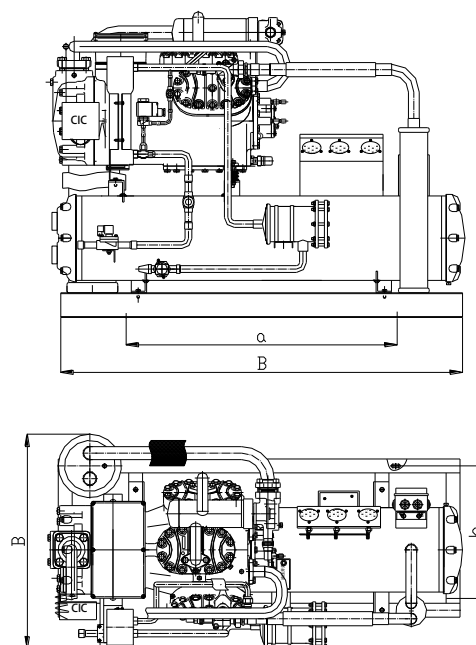
Condensing Temp. is 40 °C;

## 5. Diagrams for Overall sizes

Air Cooled Condensing Units



Water Cooled Condensing Units

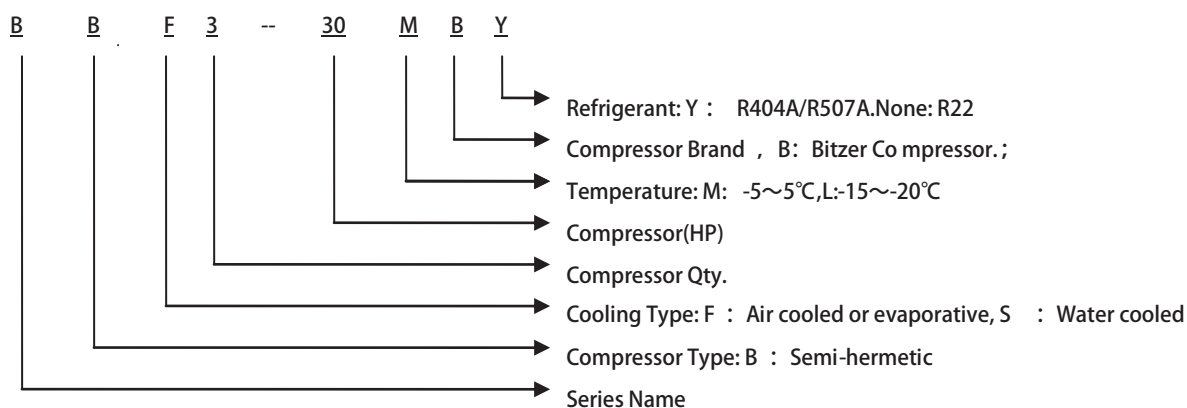


## BBF (S) Series Semi -hermetic Compressor racks

### 1. Product description

- ◆ With bitzer ECOLINE series semi -hermetic compressor
- ◆ Multi compressors were parallel connected to provide bigger capacity sharing same discharge pipe,suction pipe, condenser, liquid receiver etc.
- ◆ Compact design for easy installation and small installation size.
- ◆ Multi stage energy adjustments according to cooling capacity to save operation cost.

### 2. Model code



### 3. Main components

- |                       |                      |                                |
|-----------------------|----------------------|--------------------------------|
| ●Compressor           | ●Receiver            | ●Pressure gauge                |
| ●Crankcase heater     | ●Drier & Filter      | ●Oil protector (with oil pump) |
| ●vibration eliminator | ●Sight glasses       | ●Cylinder fan(Low temp. Unit)  |
| ●Oil separator        | ●Gas separator       | ●Electric control              |
| ●Oil balance system   | ●Suction filter      |                                |
| ●Oil filter           | ●Pressure controller |                                |

Air-cooling Condenser or evaporating. Condenser is optional!

For water cooled unit :

- |                       |                  |                                |
|-----------------------|------------------|--------------------------------|
| ●Compressor           | ●Oil filter      | ●Pressure controller           |
| ●Crankcase heater     | ●Water condenser | ●Pressure gauge                |
| ●vibration eliminator | ●Drier & Filter  | ●Oil protector (with oil pump) |
| ●Oil separator        | ●Sight glasses   | ●Cylinder fan (Low temp. Unit) |
| ●Oil balance system   | ●Gas separator   | ●Electric control              |

Remark :

The compressor rack controller is employed as standard components. PLC controller is optional.



## 4. Specifications:

### 4.1 Air cooled Rack

#### 4.1.1 Medium Temp. (Te. -5~20℃):

##### 4.1.1.1 Refrigerant R22 :

##### 4.1.1.1.1 Two compressors system

| Model          |                           | BBF2—         |         |         |        |        |        |        |        |
|----------------|---------------------------|---------------|---------|---------|--------|--------|--------|--------|--------|
|                |                           | 20MB          | 30MB    | 40MB    | 50MB   | 60MB   | 70MB   | 80MB   | 100MB  |
| Temperature(℃) |                           | -5℃~5℃        |         |         |        |        |        |        |        |
| Refrigerant    |                           | R22           |         |         |        |        |        |        |        |
| Power supply   |                           | 380V/50HZ     |         |         |        |        |        |        |        |
| Comp.          | Type                      | Semi-hermetic |         |         |        |        |        |        |        |
|                | Comp. Model               | 4VES-10       | 4PES-15 | 4NES-20 | 4HE-25 | 4GE-30 | 6HE-35 | 6GE-40 | 6FE-50 |
|                | Qty                       | 2             | 2       | 2       | 2      | 2      | 2      | 2      | 2      |
| Cap & Watt     | Te<br>-5℃                 | Cap (W)       | 41600   | 57600   | 68000  | 90800  | 105200 | 136000 | 188200 |
|                |                           | Input (KW)    | 14.42   | 20.1    | 23.62  | 31.72  | 36.56  | 47.8   | 66.6   |
|                | Te<br>-10℃                | Cap (W)       | 33300   | 46000   | 54400  | 72800  | 84800  | 109400 | 151400 |
|                |                           | Input (KW)    | 13.3    | 18.46   | 21.76  | 29.32  | 33.86  | 44.2   | 61.8   |
|                | Te<br>-15℃                | Cap (W)       | 26160   | 35980   | 42800  | 57600  | 67200  | 86400  | 99200  |
|                |                           | Input (KW)    | 12.04   | 16.64   | 19.72  | 26.66  | 30.88  | 40.0   | 56.4   |
| Connector      | Gas In(mm)                |               | φ42     | φ54     | φ54    | φ66    | φ66    | φ76    | φ76    |
|                | Liquid outlet Connect(mm) |               | φ22     | φ22     | φ28    | φ28    | φ28    | φ35    | φ35    |
|                | Gas Connect(mm)           |               | φ35     | φ35     | φ35    | φ42    | φ42    | φ54    | φ54    |
|                | Liquid inlet Connect (mm) |               | φ28     | φ28     | φ28    | φ35    | φ35    | φ42    | φ42    |
| Overall Size   | L(mm)                     |               | 2550    | 2550    | 2550   | 2550   | 2550   | 2550   | 2550   |
|                | W(mm)                     |               | 1200    | 1200    | 1200   | 1200   | 1200   | 1200   | 1200   |
|                | H(mm)                     |               | 1850    | 1850    | 1850   | 1850   | 1850   | 1850   | 1850   |

Above cooling capacity and input power under condition of condensing Temp. 45℃

#### 4.1.1.1.2 Medium Temp. type air cooled 3 compressor racks

| Model          |                           | BBF3—         |         |         |        |        |        |        |        |
|----------------|---------------------------|---------------|---------|---------|--------|--------|--------|--------|--------|
|                |                           | 30MB          | 45MB    | 60MB    | 75MB   | 90MB   | 105MB  | 120MB  | 150MB  |
| Temperature(℃) |                           | -5℃~5℃        |         |         |        |        |        |        |        |
| Refrigerant    |                           | R22           |         |         |        |        |        |        |        |
| Power supply   |                           | 380V/50HZ     |         |         |        |        |        |        |        |
| Comp.          | Type                      | Semi-hermetic |         |         |        |        |        |        |        |
|                | Comp. Model               | 4VES-10       | 4PES-15 | 4NES-20 | 4HE-25 | 4GE-30 | 6HE-35 | 6GE-40 | 6FE-50 |
|                | Qty                       | 3             | 3       | 3       | 3      | 3      | 3      | 3      | 3      |
| Cap & Watt     | Te<br>-5℃                 | Cap (W)       | 62400   | 86400   | 102000 | 136200 | 157800 | 204000 | 282300 |
|                |                           | Input (KW)    | 21.63   | 30.2    | 35.43  | 47.58  | 54.84  | 71.7   | 99.9   |
|                | Te<br>-10℃                | Cap (W)       | 49950   | 69000   | 81600  | 109200 | 127200 | 164100 | 227100 |
|                |                           | Input (KW)    | 19.95   | 27.69   | 32.64  | 43.98  | 50.79  | 66.3   | 92.7   |
|                | Te<br>-15℃                | Cap (W)       | 39240   | 53970   | 64200  | 86400  | 100800 | 129600 | 180000 |
|                |                           | Input (KW)    | 18.06   | 24.96   | 29.58  | 39.99  | 46.32  | 60.0   | 84.6   |
| Connector      | Gas In (mm)               |               | φ54     | φ66     | φ66    | φ76    | φ76    | φ108   | φ108   |
|                | Liquid outlet Connect(mm) |               | φ22     | φ28     | φ28    | φ35    | φ35    | φ42    | φ42    |
|                | Gas Connect (mm)          |               | φ35     | φ42     | φ42    | φ54    | φ54    | φ66    | φ66    |
|                | Liquid inlet Connect(mm)  |               | φ28     | φ35     | φ35    | φ42    | φ42    | φ54    | φ54    |
| Overall Size   | L(mm)                     |               | 3150    | 3150    | 3150   | 3150   | 3150   | 3150   | 3150   |
|                | W(mm)                     |               | 1000    | 1000    | 1000   | 1000   | 1000   | 1000   | 1000   |
|                | H(mm)                     |               | 1850    | 1850    | 1850   | 1850   | 1850   | 2000   | 2000   |

Above cooling capacity and input power under condition of condensing Temp. 45℃

#### 4.1.1.1.3 Medium Temp. type air cooled 4 compressor racks

| Model            |                           | BBF4—         |         |         |        |        |        |        |        |
|------------------|---------------------------|---------------|---------|---------|--------|--------|--------|--------|--------|
|                  |                           | 40MB          | 60MB    | 80MB    | 100MB  | 120MB  | 140MB  | 160MB  | 200MB  |
| Temperature( °C) |                           | -5°C~5°C      |         |         |        |        |        |        |        |
| Refrigerant      |                           | R22           |         |         |        |        |        |        |        |
| Power supply     |                           | 380V/50HZ     |         |         |        |        |        |        |        |
| Compressor       | Type                      | Semi-hermetic |         |         |        |        |        |        |        |
|                  | Comp. Model               | 4VES-10       | 4PES-15 | 4NES-20 | 4HE-25 | 4GE-30 | 6HE-35 | 6GE-40 | 6FE-50 |
|                  | Qty                       | 4             | 4       | 4       | 4      | 4      | 4      | 4      | 4      |
| Cap & Watt       | Te<br>-5°C                | Cap (W)       | 83200   | 115200  | 136000 | 181600 | 210400 | 272000 | 312400 |
|                  |                           | Input (KW)    | 28.84   | 40.2    | 47.24  | 63.44  | 73.12  | 95.6   | 109.6  |
|                  | Te<br>-10°C               | Cap (W)       | 66600   | 92000   | 108800 | 145600 | 169600 | 218800 | 250800 |
|                  |                           | Input (KW)    | 26.6    | 36.92   | 43.52  | 58.64  | 67.72  | 88.4   | 101.2  |
|                  | Te<br>-15°C               | Cap (W)       | 52320   | 71960   | 85600  | 115200 | 134400 | 172800 | 198400 |
|                  |                           | Input (KW)    | 24.08   | 33.28   | 39.44  | 53.32  | 61.76  | 80.0   | 92.4   |
| Connector        | Gas In (mm)               |               | φ54     | φ67     | φ76    | φ76    | φ108   | φ108   | φ108   |
|                  | Liquid outlet Connect(mm) |               | φ28     | φ28     | φ35    | φ35    | φ42    | φ42    | φ42    |
|                  | Gas Connect (mm)          |               | φ42     | φ54     | φ54    | φ54    | φ66    | φ66    | φ66    |
|                  | Liquid inlet Connect (mm) |               | φ35     | φ35     | φ42    | φ42    | φ54    | φ54    | φ54    |
| Overall Size     |                           | L(mm)         | 3300    | 3300    | 3800   | 3800   | 3800   | 3800   | 3800   |
|                  |                           | W(mm)         | 1000    | 1000    | 1000   | 1000   | 1000   | 1000   | 1000   |
|                  |                           | H(mm)         | 1850    | 1850    | 1850   | 1850   | 2000   | 2000   | 2000   |

Above cooling capacity and input power under condition of condensing Temp. 45 °C

#### 4.1.1.2 Refrigerant R404A/R507A

##### 4.1.1.2.1 Medium Temp. air cooled 2 compressor racks :

| Model            |                           | BBF2—         |          |          |         |         |         |         |         |
|------------------|---------------------------|---------------|----------|----------|---------|---------|---------|---------|---------|
|                  |                           | 18MBY         | 24MBY    | 28MBY    | 36MBY   | 46MBY   | 56MBY   | 68MBY   | 88MBY   |
| Temperature( °C) |                           | -5°C~5°C      |          |          |         |         |         |         |         |
| Refrigerant      |                           | R404A/R507A   |          |          |         |         |         |         |         |
| Power supply     |                           | 380V/50HZ     |          |          |         |         |         |         |         |
| Comp.            | Type                      | Semi-hermetic |          |          |         |         |         |         |         |
|                  | Comp. Model               | 4TES-9Y       | 4PES-12Y | 4NES-14Y | 4HE-18Y | 4GE-23Y | 6HE-28Y | 6GE-34Y | 6FE-44Y |
|                  | Qty                       | 2             | 2        | 2        | 2       | 2       | 2       | 2       | 2       |
| Cap & Watt       | Te<br>-5°C                | Cap (W)       | 48400    | 55200    | 65800   | 88400   | 102000  | 129800  | 150400  |
|                  |                           | Input (KW)    | 20.36    | 22.58    | 27.26   | 36.78   | 44.0    | 54.0    | 65.4    |
|                  | Te<br>-10°C               | Cap (W)       | 38320    | 43600    | 52200   | 70800   | 82200   | 104200  | 121600  |
|                  |                           | Input (KW)    | 18.56    | 20.54    | 24.96   | 33.78   | 40.2    | 49.8    | 60.2    |
|                  | Te<br>-15°C               | Cap (W)       | 29920    | 33700    | 40600   | 56000   | 65200   | 82400   | 97200   |
|                  |                           | Input (KW)    | 16.64    | 18.34    | 22.46   | 30.6    | 36.42   | 45.2    | 54.8    |
| Connector        | Gas In (mm)               |               | φ42      | φ54      | φ54     | φ66     | φ66     | φ76     | φ76     |
|                  | Liquid outlet Connect(mm) |               | φ22      | φ22      | φ28     | φ28     | φ28     | φ35     | φ35     |
|                  | Gas Connect (mm)          |               | φ35      | φ35      | φ35     | φ42     | φ42     | φ54     | φ54     |
|                  | Liquid inlet Connect (mm) |               | φ28      | φ28      | φ28     | φ35     | φ35     | φ42     | φ42     |
| Overall Size     |                           | L(mm)         | 2550     | 2550     | 2550    | 2550    | 2550    | 2550    | 2550    |
|                  |                           | W(mm)         | 1200     | 1200     | 1200    | 1200    | 1200    | 1200    | 1200    |
|                  |                           | H(mm)         | 1850     | 1850     | 1850    | 1850    | 1850    | 1850    | 1850    |

Above cooling capacity and input power under condition of condensing Temp. 45 °C;

4.1.1.2.2 Medium Temp. air cooled 3 compressor racks :

| Model            |                           |            | BBF3—         |          |          |         |         |         |         |         |
|------------------|---------------------------|------------|---------------|----------|----------|---------|---------|---------|---------|---------|
|                  |                           |            | 27MBY         | 36MBY    | 42MBY    | 54MBY   | 69MBY   | 84MBY   | 102MBY  | 132MBY  |
| Temperature( °C) |                           |            | -5℃~5℃        |          |          |         |         |         |         |         |
| Refrigerant      |                           |            | R404A/R507A   |          |          |         |         |         |         |         |
| Power supply     |                           |            | 380V/50HZ     |          |          |         |         |         |         |         |
| Comp.            | Type                      |            | Semi-hermetic |          |          |         |         |         |         |         |
|                  | Comp. Model               |            | 4TES-9Y       | 4PES-12Y | 4NES-14Y | 4HE-18Y | 4GE-23Y | 6HE-28Y | 6GE-34Y | 6FE-44Y |
|                  | Qty                       |            | 3             | 3        | 3        | 3       | 3       | 3       | 3       | 3       |
| Cap & Watt       | Te<br>-5℃                 | Cap (W)    | 72600         | 82800    | 98700    | 132600  | 153000  | 194700  | 225600  | 270900  |
|                  |                           | Input (KW) | 30.54         | 33.87    | 40.89    | 55.17   | 66.0    | 81.0    | 98.1    | 116.7   |
|                  | Te<br>-10℃                | Cap (W)    | 57480         | 65400    | 78300    | 106200  | 123300  | 156300  | 182400  | 218700  |
|                  |                           | Input (KW) | 27.84         | 30.81    | 37.44    | 50.67   | 60.3    | 74.7    | 90.3    | 108.0   |
|                  | Te<br>-15℃                | Cap (W)    | 44880         | 50550    | 60900    | 84000   | 97800   | 123600  | 145800  | 174600  |
|                  |                           | Input (KW) | 24.96         | 27.51    | 33.69    | 45.9    | 54.63   | 67.8    | 82.2    | 98.7    |
| Connector        | Gas In (mm)               |            | φ54           | φ66      | φ66      | φ76     | φ76     | φ108    | φ108    | φ108    |
|                  | Liquid outlet Connect(mm) |            | φ22           | φ28      | φ28      | φ35     | φ35     | φ42     | φ42     | φ42     |
|                  | Gas Connect (mm)          |            | φ35           | φ42      | φ42      | φ54     | φ54     | φ66     | φ66     | φ66     |
|                  | Liquid inlet Connect (mm) |            | φ28           | φ35      | φ35      | φ42     | φ42     | φ54     | φ54     | φ54     |
| Overall Size     |                           | L(mm)      | 2750          | 2750     | 2750     | 2850    | 2850    | 3150    | 3150    | 3150    |
|                  |                           | W(mm)      | 1120          | 1120     | 1120     | 1120    | 1120    | 1120    | 1120    | 1120    |
|                  |                           | H(mm)      | 1700          | 1700     | 1700     | 1800    | 1800    | 1800    | 1800    | 1800    |

Above cooling capacity and input power under condition of condensin g Temp. 45 °C

4.1.1.2.3 Medium Temp. air cooled 4 compressor racks :

| Model            |                           | BBF4—       |               |          |          |         |         |         |         |         |
|------------------|---------------------------|-------------|---------------|----------|----------|---------|---------|---------|---------|---------|
|                  |                           | 36MBY       | 48MBY         | 56MBY    | 72MBY    | 92MBY   | 112MBY  | 136MBY  | 176MBY  |         |
| Temperature( °C) |                           | -5℃~5℃      |               |          |          |         |         |         |         |         |
| Refrigerant      |                           | R404A/R507A |               |          |          |         |         |         |         |         |
| Power supply     |                           | 380V/50HZ   |               |          |          |         |         |         |         |         |
| Comp.            | Type                      |             | Semi-hermetic |          |          |         |         |         |         |         |
|                  | Comp. Model               |             | 4TES-9Y       | 4PES-12Y | 4NES-14Y | 4HE-18Y | 4GE-23Y | 6HE-28Y | 6GE-34Y | 6FE-44Y |
|                  | Qty                       |             | 4             | 4        | 4        | 4       | 4       | 4       | 4       | 4       |
| Cap & Watt       | Te<br>-5℃                 | Cap (W)     | 96800         | 110400   | 131600   | 176800  | 204000  | 259600  | 300800  | 361200  |
|                  |                           | Input (KW)  | 40.72         | 45.16    | 54.52    | 73.56   | 88.0    | 108.0   | 130.8   | 155.6   |
|                  | Te<br>-10℃                | Cap (W)     | 76640         | 87200    | 104400   | 141600  | 164400  | 208400  | 243200  | 291600  |
|                  |                           | Input (KW)  | 37.12         | 41.08    | 49.92    | 67.56   | 80.4    | 99.6    | 120.4   | 144.0   |
|                  | Te<br>-15℃                | Cap (W)     | 59840         | 67400    | 81200    | 112000  | 130400  | 164800  | 194400  | 232800  |
|                  |                           | Input (KW)  | 33.28         | 36.68    | 44.92    | 61.2    | 72.84   | 90.4    | 109.6   | 131.6   |
| Connector        | Gas In (mm)               |             | φ54           | Φ67      | φ76      | φ76     | φ108    | φ108    | φ108    | φ133    |
|                  | Liquid outlet Connect(mm) |             | φ28           | φ28      | φ35      | φ35     | φ42     | φ42     | φ42     | φ42     |
|                  | Gas Connect (mm)          |             | φ42           | φ54      | φ54      | φ54     | φ66     | φ66     | φ66     | φ79     |
|                  | Liquid inlet Connect (mm) |             | φ35           | φ35      | φ42      | φ42     | φ54     | φ54     | φ54     | φ54     |
| Overall Size     |                           | L(mm)       | 3300          | 3300     | 3300     | 3500    | 3800    | 3800    | 3800    | 3800    |
|                  |                           | W(mm)       | 1120          | 1120     | 1120     | 1120    | 1120    | 1120    | 1120    | 1120    |
|                  |                           | H(mm)       | 1700          | 1700     | 1700     | 1800    | 1800    | 1800    | 1800    | 1800    |

Above cooling capacity and input power under condition of condensing Temp. 45 °C;

#### 4.1.2 Low Temp (Te -20~-40°C.Refrigerant R404A/R507A ) :

##### 4.1.2.1 Air cool ed 2 compressor racks

| Model            |                           |            | BBF2—         |          |         |          |         |          |         |
|------------------|---------------------------|------------|---------------|----------|---------|----------|---------|----------|---------|
|                  |                           |            | 18LBY         | 28LBY    | 36LBY   | 46LBY    | 56LBY   | 68LBY    | 88LBY   |
| Temperature( °C) |                           |            | -15℃~-30℃     |          |         |          |         |          |         |
| Refrigerant      |                           |            | R404A/R507A   |          |         |          |         |          |         |
| Power supply     |                           |            | 380V/50HZ     |          |         |          |         |          |         |
| Comp             | Type                      |            | Semi-hermetic |          |         |          |         |          |         |
|                  | Comp. Model               |            | 4TES-9Y       | 4NES-14Y | 4HE-18Y | 4GE -23Y | 6HE-28Y | 6GE -34Y | 6FE-44Y |
| Cap & Watt       | Qty                       |            | 2             | 2        | 2       | 2        | 2       | 2        | 2       |
|                  | Te -25℃                   | Cap (W)    | 17240         | 23400    | 33380   | 39340    | 49200   | 59400    | 70600   |
|                  |                           | Input (KW) | 12.7          | 17.2     | 24.0    | 28.5     | 35.38   | 43.6     | 52.4    |
|                  | Te -30℃                   | Cap (W)    | 12600         | 17100    | 24900   | 29640    | 36680   | 45200    | 53200   |
|                  |                           | Input (KW) | 10.8          | 14.5     | 20.7    | 24.7     | 30.4    | 37.9     | 45.4    |
|                  | Te -35℃                   | Cap (W)    | 8920          | 12060    | 18000   | 21740    | 26520   | 33360    | 38920   |
|                  |                           | Input (KW) | 8.9           | 11.9     | 17.5    | 20.9     | 25.5    | 32.4     | 38.7    |
|                  | Te -40℃                   | Cap (W)    | 6000          | 8120     | 12440   | 15380    | 18340   | 23820    | 27220   |
| Input (KW)       |                           | 7.2        | 9.4           | 14.5     | 17.4    | 20.8     | 27.1    | 32.1     |         |
| Connector        | Gas In (mm)               |            | φ 54          | φ 54     | φ 54    | φ 66     | φ 66    | φ 76     | φ 76    |
|                  | Liquid outlet Connect(mm) |            | φ 22          | φ 22     | φ 22    | φ 22     | φ 28    | φ 28     | φ 28    |
|                  | Gas Connect (mm)          |            | φ 35          | φ 35     | φ 35    | φ 42     | φ 42    | φ 54     | φ 54    |
|                  | Liquid inlet Connect (mm) |            | φ 28          | φ 28     | φ 28    | φ 28     | φ 35    | φ 35     | φ 35    |
| Overall Size     |                           | L(mm)      | 2100          | 2100     | 2100    | 2200     | 2400    | 2400     | 2400    |
|                  |                           | W(mm)      | 1120          | 1120     | 1120    | 1120     | 1120    | 1120     | 1120    |
|                  |                           | H(mm)      | 1700          | 1700     | 1700    | 1700     | 1700    | 1700     | 1700    |

Above cooling capacity and input power under condition of condensing Temp. 45 °C

##### 4.1.2.2 Air cooled Low Temp 3 compressor racks

| Model            |                           | BBF3—         |          |         |          |         |          |         |        |
|------------------|---------------------------|---------------|----------|---------|----------|---------|----------|---------|--------|
|                  |                           | 27LBY         | 42LBY    | 54LBY   | 69LBY    | 84LBY   | 102LBY   | 132LBY  |        |
| Temperature( °C) |                           | -15℃~-30℃     |          |         |          |         |          |         |        |
| Refrigerant      |                           | R404A/R507A   |          |         |          |         |          |         |        |
| Power supply     |                           | 380V/50HZ     |          |         |          |         |          |         |        |
| Comp.            | Type                      | Semi-hermetic |          |         |          |         |          |         |        |
|                  | Comp. Model               | 4TES-9Y       | 4NES-14Y | 4HE-18Y | 4GE -23Y | 6HE-28Y | 6GE -34Y | 6FE-44Y |        |
|                  | Qty                       | 3             | 3        | 3       | 3        | 3       | 3        | 3       |        |
| Cap & Watt       | Te -25℃                   | Cap (W)       | 25860    | 35100   | 50070    | 59000   | 73800    | 89100   | 105900 |
|                  |                           | Input (KW)    | 19.1     | 25.7    | 36.0     | 42.8    | 53.07    | 65.4    | 78.6   |
|                  | Te -30℃                   | Cap (W)       | 18930    | 25650   | 37350    | 44460   | 55020    | 67800   | 79800  |
|                  |                           | Input (KW)    | 16.1     | 21.7    | 31.1     | 37.0    | 45.6     | 56.9    | 68.1   |
|                  | Te -35℃                   | Cap (W)       | 13380    | 18090   | 27000    | 32610   | 39780    | 50000   | 58380  |
|                  |                           | Input (KW)    | 13.4     | 17.8    | 26.3     | 31.4    | 38.25    | 48.6    | 58.1   |
|                  | Te -40℃                   | Cap (W)       | 9000     | 12180   | 18660    | 23070   | 27510    | 35700   | 40830  |
|                  |                           | Input (KW)    | 10.8     | 14.2    | 21.7     | 26.1    | 31.2     | 40.7    | 48.2   |
| Connector        | Gas In (mm)               |               | φ 54     | φ 54    | φ 66     | φ 76    | φ 76     | φ 108   | φ 108  |
|                  | Liquid outlet Connect(mm) |               | φ 22     | φ 22    | φ 28     | φ 28    | φ 28     | φ 35    | φ 35   |
|                  | Gas Connect (mm)          |               | φ 42     | φ 42    | φ 42     | φ 42    | φ 54     | φ 54    | Φ67    |
|                  | Liquid inlet Connect (mm) |               | φ 28     | φ 28    | φ 35     | φ 35    | φ 35     | φ 42    | φ 42   |
| Overall Size     | L(mm)                     |               | 2750     | 2750    | 2750     | 2850    | 3150     | 3150    | 3150   |
|                  | W(mm)                     |               | 1120     | 1120    | 1120     | 1120    | 1120     | 1120    | 1120   |
|                  | H(mm)                     |               | 1700     | 1700    | 1700     | 1700    | 1850     | 1850    | 1850   |

Above cooling capacity and input power under condition of condensing Temp. 45 °C



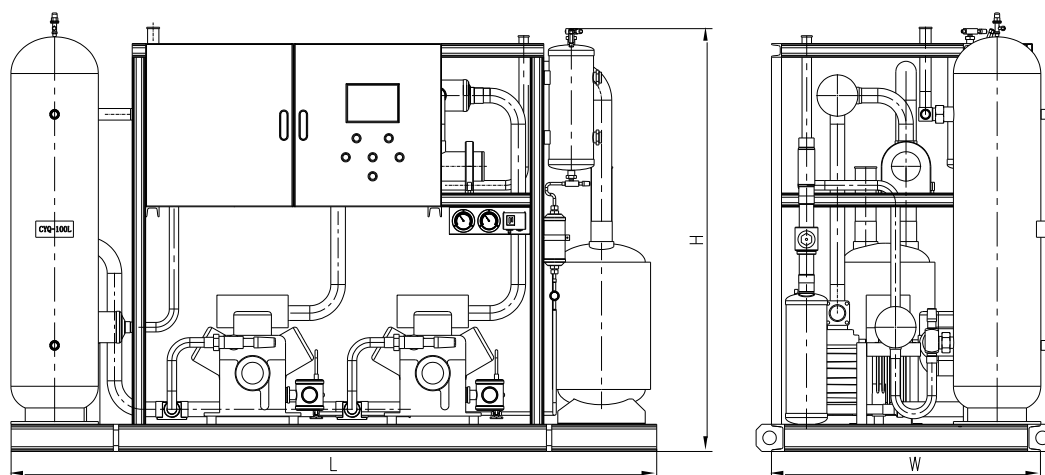
#### 4.1.2.3 Air cooled Low Temp 4 compressor racks

| Model            |                           | BBF4—         |          |         |         |         |         |         |
|------------------|---------------------------|---------------|----------|---------|---------|---------|---------|---------|
|                  |                           | 36LBY         | 56LBY    | 72LBY   | 92LBY   | 112LBY  | 136LBY  | 176LBY  |
| Temperature( °C) |                           | -15℃~30℃      |          |         |         |         |         |         |
| Refrigerant      |                           | R404A/R507A   |          |         |         |         |         |         |
| Power supply     |                           | 380V/50HZ     |          |         |         |         |         |         |
| Comp.            | Type                      | Semi-hermetic |          |         |         |         |         |         |
|                  | Comp. Model               | 4TES-9Y       | 4NES-14Y | 4HE-18Y | 4GE-23Y | 6HE-28Y | 6GE-34Y | 6FE-44Y |
|                  | Qty                       | 4             | 4        | 4       | 4       | 4       | 4       | 4       |
| Cap & Watt       | Te<br>-25℃                | Cap (W)       | 34480    | 46800   | 66760   | 78680   | 98400   | 118800  |
|                  |                           | Input (KW)    | 25.4     | 34.3    | 48.0    | 57.1    | 70.76   | 87.2    |
|                  | Te<br>-30℃                | Cap (W)       | 25240    | 34200   | 49800   | 59280   | 73360   | 90400   |
|                  |                           | Input (KW)    | 21.5     | 29.0    | 41.4    | 49.3    | 60.8    | 75.8    |
|                  | Te<br>-35℃                | Cap (W)       | 17840    | 24120   | 36000   | 43480   | 53040   | 66720   |
|                  |                           | Input (KW)    | 17.8     | 23.8    | 35.0    | 41.8    | 51.0    | 64.8    |
|                  | Te<br>-40℃                | Cap (W)       | 12000    | 16240   | 24880   | 30760   | 36680   | 47640   |
|                  |                           | Input (KW)    | 14.4     | 18.9    | 28.9    | 34.8    | 41.6    | 54.2    |
| Connector        | Gas In (mm)               |               | φ54      | φ54     | φ66     | φ76     | φ108    | φ108    |
|                  | Liquid outlet Connect(mm) |               | φ22      | φ22     | φ28     | φ28     | φ35     | φ35     |
|                  | Gas Connect (mm)          |               | φ42      | φ42     | φ42     | φ42     | φ54     | φ67     |
|                  | Liquid inlet Connect (mm) |               | φ28      | φ28     | φ35     | φ35     | φ42     | φ42     |
| Overall Size     | L(mm)                     |               | 3150     | 3150    | 3150    | 3150    | 3150    | 3150    |
|                  | W(mm)                     |               | 1000     | 1000    | 1000    | 1000    | 1000    | 1000    |
|                  | H(mm)                     |               | 1850     | 1850    | 1850    | 1850    | 1850    | 1850    |

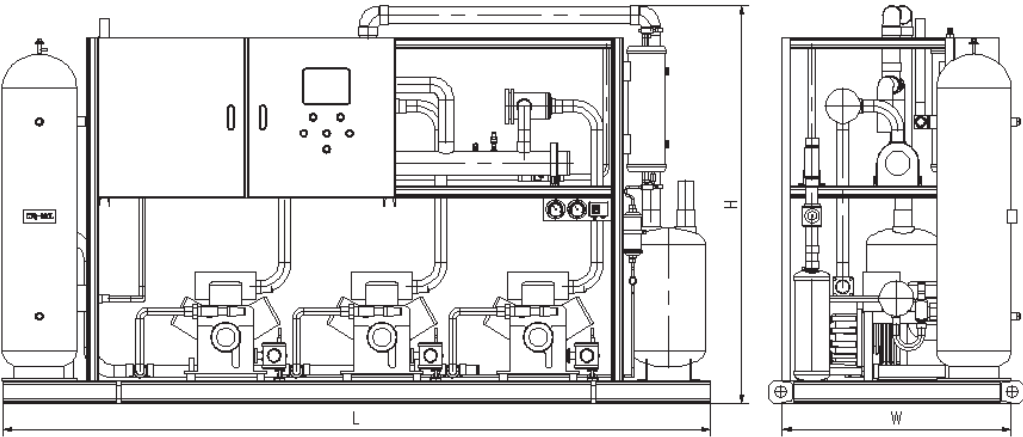
Above cooling capacity and input power under condition of condensing Temp. 45 °C

## 5. Diagrams for Air Cooled Rack Overall sizes

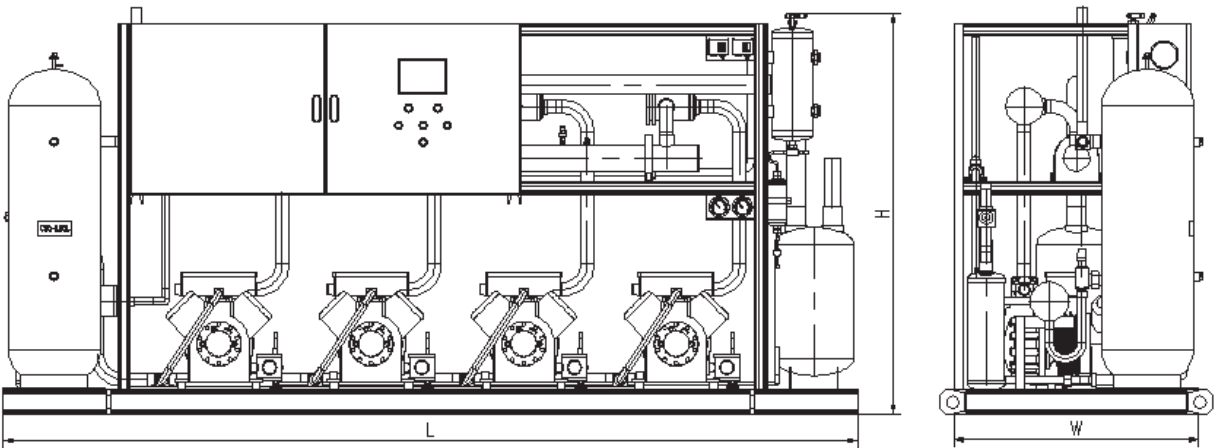
### 2 Compressor Rack



3 Compressor Rack



4 Compressor Rack



## 4.2 Water cooled Rack

### 4.2.1 Medium Temp. (Te -5~20°C)

#### 4.2.1.1 Refrigerant R22

##### 4.2.1.1.1 Water cooled Mid Temp 2 compressor racks

| Model            |                                   | BBS2—         |         |         |        |        |        |        |        |
|------------------|-----------------------------------|---------------|---------|---------|--------|--------|--------|--------|--------|
|                  |                                   | 20MB          | 30MB    | 40MB    | 50MB   | 60MB   | 70MB   | 80MB   | 100MB  |
| Temperature( °C) |                                   | -5°C~5°C      |         |         |        |        |        |        |        |
| Refrigerant      |                                   | R22           |         |         |        |        |        |        |        |
| Power supply     |                                   | 380V/50HZ     |         |         |        |        |        |        |        |
| Comp.            | Type                              | Semi-hermetic |         |         |        |        |        |        |        |
|                  | Comp. Model                       | 4VES-10       | 4PES-15 | 4NES-20 | 4HE-25 | 4GE-30 | 6HE-35 | 6GE-40 | 6FE-50 |
|                  | Qty                               | 2             | 2       | 2       | 2      | 2      | 2      | 2      | 2      |
| Condenser        | Type                              | Shell & Tube  |         |         |        |        |        |        |        |
|                  | Cooling Water (m <sup>3</sup> /h) | 13            | 18      | 20.6    | 28     | 32     | 38     | 48     | 58     |
|                  | Connector Size                    | 2-1/2"        | 2-1/2"  | 2-1/2"  | 2-1/2" | 3"     | 3"     | 3"     | 4"     |
| Cap. & Watt      | Te -5°C                           | Cap (W)       | 44600   | 61800   | 72800  | 96800  | 112200 | 145400 | 166800 |
|                  |                                   | Input (KW)    | 13.62   | 18.98   | 22.24  | 29.78  | 34.28  | 44.8   | 62.6   |
|                  | Te -10°C                          | Cap (W)       | 35860   | 49600   | 58600  | 78200  | 90800  | 117200 | 134600 |
|                  |                                   | Input (KW)    | 12.66   | 17.58   | 20.68  | 27.76  | 32.02  | 41.8   | 58.4   |
|                  | Te -15°C                          | Cap (W)       | 28360   | 39080   | 46400  | 62200  | 72400  | 93200  | 107000 |
|                  |                                   | Input (KW)    | 11.56   | 16.0    | 18.9   | 25.46  | 29.42  | 38.24  | 44.0   |
| Connector        | Liquid outlet Connect(mm)         | φ42           | φ54     | φ54     | φ66    | φ66    | φ76    | φ76    | φ76    |
|                  | Gas Connect (mm)                  | φ22           | φ22     | φ28     | φ28    | φ28    | φ35    | φ35    | φ35    |
| Overall Size     | L(mm)                             | 2300          | 2300    | 2300    | 2300   | 2300   | 2300   | 2300   | 2300   |
|                  | W(mm)                             | 1250          | 1250    | 1250    | 1250   | 1250   | 1250   | 1250   | 1250   |
|                  | H(mm)                             | 1850          | 1850    | 1850    | 1850   | 1850   | 1850   | 1850   | 1850   |

Above cooling capacity and input power under condition of condensing Temp. 40 °C

##### 4.2.1.1.2 Water cooled Mid Temp 3 compressor racks

| Model            |                                   | BBS3—         |         |         |        |        |        |        |        |
|------------------|-----------------------------------|---------------|---------|---------|--------|--------|--------|--------|--------|
|                  |                                   | 30MB          | 45MB    | 60MB    | 75MB   | 90MB   | 105MB  | 120MB  | 150MB  |
| Temperature( °C) |                                   | -5°C~5°C      |         |         |        |        |        |        |        |
| Refrigerant      |                                   | R22           |         |         |        |        |        |        |        |
| Power supply     |                                   | 380V/50HZ     |         |         |        |        |        |        |        |
| Comp.            | Type                              | Semi-hermetic |         |         |        |        |        |        |        |
|                  | Comp. Model                       | 4VES-10       | 4PES-15 | 4NES-20 | 4HE-25 | 4GE-30 | 6HE-35 | 6GE-40 | 6FE-50 |
|                  | Qty                               | 3             | 3       | 3       | 3      | 3      | 3      | 3      | 3      |
| Condenser        | Type                              | Shell & Tube  |         |         |        |        |        |        |        |
|                  | Cooling Water (m <sup>3</sup> /h) | 20            | 26      | 31      | 42     | 50     | 57     | 71     | 86     |
|                  | Connector Size                    | 2-1/2"        | 2-1/2"  | 3"      | 3"     | 3"     | 4"     | 5"     | 5"     |
| Cap. & Watt      | Te -5°C                           | Cap (W)       | 66900   | 92700   | 109200 | 145200 | 168300 | 218100 | 301200 |
|                  |                                   | Input (KW)    | 20.43   | 28.47   | 33.36  | 44.67  | 51.42  | 67.2   | 93.9   |
|                  | Te -10°C                          | Cap (W)       | 53790   | 74400   | 87900  | 117300 | 136200 | 175800 | 243300 |
|                  |                                   | Input (KW)    | 18.99   | 26.37   | 31.02  | 41.64  | 48.03  | 62.7   | 87.6   |
|                  | Te -15°C                          | Cap (W)       | 42540   | 58620   | 69600  | 93300  | 108600 | 139800 | 193800 |
|                  |                                   | Input (KW)    | 17.34   | 24.0    | 28.35  | 38.19  | 44.13  | 57.36  | 80.7   |
| Connector        | Liquid outlet Connect(mm)         | φ54           | φ66     | φ66     | φ76    | φ76    | φ108   | φ108   | φ108   |
|                  | Gas Connect (mm)                  | φ22           | φ28     | φ28     | φ35    | φ35    | φ42    | φ42    | φ42    |
| Overall Size     | L(mm)                             | 2950          | 2950    | 2950    | 2950   | 2950   | 2950   | 2950   | 2950   |
|                  | W(mm)                             | 1250          | 1250    | 1250    | 1250   | 1250   | 1250   | 1250   | 1250   |
|                  | H(mm)                             | 1850          | 1850    | 1850    | 1850   | 1850   | 1850   | 1850   | 1850   |

Above cooling capacity and input power under condition of condensing Temp. 40 °C

#### 4.2.1.1.3 Water cooled Mid Temp 4 compressor racks

| Model            |                                   | BBS4—         |         |         |        |        |        |        |        |
|------------------|-----------------------------------|---------------|---------|---------|--------|--------|--------|--------|--------|
|                  |                                   | 40MB          | 60MB    | 80MB    | 100MB  | 120MB  | 140MB  | 160MB  | 200MB  |
| Temperature( °C) |                                   | -5°C~5°C      |         |         |        |        |        |        |        |
| Refrigerant      |                                   | R22           |         |         |        |        |        |        |        |
| Power supply     |                                   | 380V/50HZ     |         |         |        |        |        |        |        |
| Comp.            | Type                              | Semi-hermetic |         |         |        |        |        |        |        |
|                  | Comp. Model                       | 4VES-10       | 4PES-15 | 4NES-20 | 4HE-25 | 4GE-30 | 6HE-35 | 6GE-40 | 6FE-50 |
|                  | Qty                               | 4             | 4       | 4       | 4      | 4      | 4      | 4      | 4      |
| Condenser        | Type                              | Shell & Tube  |         |         |        |        |        |        |        |
|                  | Cooling Water (m <sup>3</sup> /h) | 26            | 35      | 41      | 55     | 65     | 76     | 95     | 115    |
|                  | Connector Size                    | 2-1/2"        | 3"      | 3"      | 4"     | 4"     | 5"     | 5"     | 5"     |
| Cap. & Watt      | Te -5°C                           | Cap (W)       | 89200   | 123600  | 145600 | 193600 | 224400 | 290800 | 333600 |
|                  |                                   | Input (KW)    | 27.24   | 37.96   | 44.48  | 59.56  | 68.56  | 89.6   | 102.8  |
|                  | Te -10°C                          | Cap (W)       | 71720   | 99200   | 117200 | 156400 | 181600 | 234400 | 269200 |
|                  |                                   | Input (KW)    | 25.32   | 35.16   | 41.36  | 55.52  | 64.04  | 83.6   | 96.0   |
|                  | Te -15°C                          | Cap (W)       | 56720   | 78160   | 92800  | 124400 | 144800 | 186400 | 214000 |
|                  |                                   | Input (KW)    | 23.12   | 32.0    | 37.8   | 50.92  | 58.84  | 76.48  | 88.0   |
| Conne            | Liquid outlet Connect(mm)         |               | φ54     | φ67     | φ76    | φ76    | φ108   | φ108   | φ108   |
|                  | Gas Connect (mm)                  |               | φ28     | φ28     | φ35    | φ35    | φ42    | φ42    | φ42    |
| Overall Size     | L(mm)                             |               | 3600    | 3600    | 3600   | 3600   | 3600   | 3600   | 3600   |
|                  | W(mm)                             |               | 1250    | 1250    | 1250   | 1250   | 1250   | 1250   | 1250   |
|                  | H(mm)                             |               | 1850    | 1850    | 1850   | 1850   | 1850   | 1850   | 1850   |

Above cooling capacity and input power under condition of condensing Temp. 40 °C

#### 4.2.1.2 Refrigerant R404A/R507A

##### 4.2.1.2.1 Water cooled Med. Temp 2 compressor rack

| Model            |                                   | BBS2—         |          |          |         |         |         |         |         |
|------------------|-----------------------------------|---------------|----------|----------|---------|---------|---------|---------|---------|
|                  |                                   | 18MBY         | 24MBY    | 28MBY    | 36MBY   | 46MBY   | 56MBY   | 68MBY   | 88MBY   |
| Temperature( °C) |                                   | -5°C~5°C      |          |          |         |         |         |         |         |
| Refrigerant      |                                   | R404A/R507A   |          |          |         |         |         |         |         |
| Power supply     |                                   | 380V/50HZ     |          |          |         |         |         |         |         |
| Comp.            | Type                              | Semi-hermetic |          |          |         |         |         |         |         |
|                  | Comp. Model                       | 4TES-9Y       | 4PES-12Y | 4NES-14Y | 4HE-18Y | 4GE-23Y | 6HE-28Y | 6GE-34Y | 6FE-44Y |
|                  | Qty                               | 2             | 2        | 2        | 2       | 2       | 2       | 2       | 2       |
| Condenser        | Type                              | Shell & Tube  |          |          |         |         |         |         |         |
|                  | Cooling Water (m <sup>3</sup> /h) | 16.5          | 19       | 22.5     | 30      | 35      | 41      | 51      | 62      |
|                  | Connector Size                    | 2-1/2"        | 2-1/2"   | 2-1/2"   | 2-1/2"  | 3"      | 3"      | 3"      | 4"      |
| Cap. & Watt      | Te -5°C                           | Cap (W)       | 53800    | 61800    | 73400   | 97800   | 113000  | 143600  | 166400  |
|                  |                                   | Input (KW)    | 19.2     | 21.44    | 25.82   | 34.72   | 41.4    | 51      | 61.4    |
|                  | Te -10°C                          | Cap (W)       | 43000    | 49000    | 58400   | 79000   | 91400   | 116000  | 135000  |
|                  |                                   | Input (KW)    | 17.66    | 19.7     | 23.86   | 32.16   | 38.26   | 47.2    | 57.0    |
|                  | Te -15°C                          | Cap (W)       | 33780    | 38320    | 46000   | 62800   | 73000   | 92400   | 108400  |
|                  |                                   | Input (KW)    | 15.98    | 17.76    | 21.68   | 29.38   | 34.88   | 43.2    | 52.2    |
| Conne            | Liquid outlet Connect(mm)         |               | φ42      | φ54      | φ54     | φ66     | φ66     | φ76     | φ76     |
|                  | Gas Connect (mm)                  |               | φ22      | φ22      | φ28     | φ28     | φ28     | φ35     | φ35     |
| Overall Size     | L(mm)                             |               | 2300     | 2300     | 2300    | 2300    | 2300    | 2300    | 2300    |
|                  | W(mm)                             |               | 1250     | 1250     | 1250    | 1250    | 1250    | 1250    | 1250    |
|                  | H(mm)                             |               | 1850     | 1850     | 1850    | 1850    | 1850    | 1850    | 1850    |

Above cooling capacity and input power under condition of condensing Temp. 40 °C



#### 4.2.1.2.2 Water cooled Med. Temp 3 compressor rack

| Model            |                                   | BBS3—         |          |          |         |         |         |         |         |
|------------------|-----------------------------------|---------------|----------|----------|---------|---------|---------|---------|---------|
|                  |                                   | 27MBY         | 36MBY    | 42MBY    | 54MBY   | 69MBY   | 84MBY   | 102MBY  | 132MBY  |
| Temperature( °C) |                                   | -5°C~5°C      |          |          |         |         |         |         |         |
| Refrigerant      |                                   | R404A/R507 A  |          |          |         |         |         |         |         |
| Power supply     |                                   | 380V/50HZ     |          |          |         |         |         |         |         |
| Comp.            | Type                              | Semi-hermetic |          |          |         |         |         |         |         |
|                  | Comp. Model                       | 4TES-9Y       | 4PES-12Y | 4NES-14Y | 4HE-18Y | 4GE-23Y | 6HE-28Y | 6GE-34Y | 6FE-44Y |
|                  | Qty                               | 3             | 3        | 3        | 3       | 3       | 3       | 3       | 3       |
| Condenser        | Type                              | Shell & Tube  |          |          |         |         |         |         |         |
|                  | Cooling Water (m <sup>3</sup> /h) | 24.5          | 28       | 34       | 45      | 52      | 62      | 77      | 92      |
|                  | Connector Size                    | 2-1/2"        | 2-1/2"   | 3"       | 3"      | 3"      | 4"      | 5"      | 5"      |
| Cap. & Watt      | Te -5°C                           | Cap (W)       | 80700    | 92700    | 110100  | 146700  | 169500  | 215400  | 249600  |
|                  |                                   | Input (KW)    | 28.8     | 32.16    | 38.73   | 52.08   | 62.1    | 76.5    | 92.1    |
|                  | Te -10°C                          | Cap (W)       | 64500    | 73500    | 87600   | 118500  | 137100  | 174000  | 202500  |
|                  |                                   | Input (KW)    | 26.49    | 29.55    | 35.79   | 48.24   | 57.39   | 70.8    | 85.5    |
|                  | Te -15°C                          | Cap (W)       | 50670    | 57480    | 69000   | 94200   | 109500  | 138600  | 162600  |
|                  |                                   | Input (KW)    | 23.97    | 26.64    | 32.52   | 44.07   | 52.32   | 64.8    | 78.3    |
| Connector        | Liquid outlet Connect(mm)         |               | φ54      | φ66      | φ66     | φ76     | φ76     | φ108    | φ108    |
|                  | Gas Connect (mm)                  |               | φ22      | φ28      | φ28     | φ35     | φ35     | φ42     | φ42     |
| Overall Size     | L(mm)                             |               | 2950     | 2950     | 2950    | 2950    | 2950    | 2950    | 2950    |
|                  | W(mm)                             |               | 1250     | 1250     | 1250    | 1250    | 1250    | 1250    | 1250    |
|                  | H(mm)                             |               | 1850     | 1850     | 1850    | 1850    | 1850    | 1850    | 1850    |

Above cooling capacity and input power under condition of condensing Temp. 40 °C

#### 4.2.1.2.3 Water cooled Med. Temp 4 compressor rack

| Model            |                                   | BBS4—         |          |          |         |         |         |         |         |
|------------------|-----------------------------------|---------------|----------|----------|---------|---------|---------|---------|---------|
|                  |                                   | 36MBY         | 48MBY    | 56MBY    | 72MBY   | 92MBY   | 112MBY  | 136MBY  | 176MBY  |
| Temperature( °C) |                                   | -5°C~5°C      |          |          |         |         |         |         |         |
| Refrigerant      |                                   | R404A/R507A   |          |          |         |         |         |         |         |
| Power supply     |                                   | 380V/50HZ     |          |          |         |         |         |         |         |
| Comp.            | Type                              | Semi-hermetic |          |          |         |         |         |         |         |
|                  | Comp. Model                       | 4TES-9Y       | 4PES-12Y | 4NES-14Y | 4HE-18Y | 4GE-23Y | 6HE-28Y | 6GE-34Y | 6FE-44Y |
|                  | Qty                               | 4             | 4        | 4        | 4       | 4       | 4       | 4       | 4       |
| Condenser        | Type                              | Shell & Tube  |          |          |         |         |         |         |         |
|                  | Cooling Water (m <sup>3</sup> /h) | 33            | 38       | 45       | 60      | 70      | 82      | 102     | 123     |
|                  | Connector Size                    | 2-1/2"        | 3"       | 3"       | 4"      | 4"      | 5"      | 5"      | 5"      |
| Cap. & Watt      | Te -5°C                           | Cap (W)       | 107600   | 123600   | 146800  | 195600  | 226000  | 287200  | 332800  |
|                  |                                   | Input (KW)    | 38.4     | 42.88    | 51.64   | 69.44   | 82.8    | 102     | 122.8   |
|                  | Te -10°C                          | Cap (W)       | 86000    | 98000    | 116800  | 158000  | 182800  | 232000  | 270000  |
|                  |                                   | Input (KW)    | 35.32    | 39.4     | 47.72   | 64.32   | 76.52   | 94.4    | 114.0   |
|                  | Te -15°C                          | Cap (W)       | 67560    | 76640    | 92000   | 125600  | 146000  | 184800  | 216800  |
|                  |                                   | Input (KW)    | 31.96    | 35.52    | 43.36   | 58.76   | 69.76   | 86.4    | 104.4   |
| Connector        | Liquid outlet Connect(mm)         |               | φ54      | φ67      | φ76     | φ76     | φ108    | φ108    | φ108    |
|                  | Gas Connect (mm)                  |               | φ28      | φ28      | φ35     | φ35     | φ42     | φ42     | φ42     |
| Overall Size     | L(mm)                             |               | 3600     | 3600     | 3600    | 3600    | 3600    | 3600    | 3600    |
|                  | W(mm)                             |               | 1250     | 1250     | 1250    | 1250    | 1250    | 1250    | 1250    |
|                  | H(mm)                             |               | 1850     | 1850     | 1850    | 1850    | 1850    | 1850    | 1850    |

Above cooling capacity and input power under condition of condensing Temp. 40 °C

#### 4.2.2 Water cooled Low Temp (Te-20~40°C.Refrigerant R404A/R507A)

##### 4.2.2.1 Water cooled Low Temp 2 compressor rack

| Model            |                           | BBS2—         |          |         |         |         |         |         |
|------------------|---------------------------|---------------|----------|---------|---------|---------|---------|---------|
|                  |                           | 18LB          | 28LB     | 36LB    | 46LB    | 56LB    | 68LB    | 88LB    |
| Temperature( °C) |                           | -15°C~30°C    |          |         |         |         |         |         |
| Refrigerant      |                           | R404A/R507A   |          |         |         |         |         |         |
| Power supply     |                           | 380V/50HZ     |          |         |         |         |         |         |
| Comp.            | Type                      | Semi-hermetic |          |         |         |         |         |         |
|                  | Comp. Model               | 4TES-9Y       | 4NES-14Y | 4HE-18Y | 4GE-23Y | 6HE-28Y | 6GE-34Y | 6FE-44Y |
|                  | Qty                       | 2             | 2        | 2       | 2       | 2       | 2       | 2       |
| Condenser        | Liquid outlet             | Shell & Tube  |          |         |         |         |         |         |
|                  | Gas Connect (mm)          | 7.5           | 10       | 14      | 16      | 20      | 25      | 29      |
|                  | Liquid outlet Connect(mm) | 2-1/2"        | 2-1/2"   | 2-1/2"  | 2-1/2"  | 2-1/2"  | 2-1/2"  | 3"      |
| Cap. & Watt      | Te<br>-25°C               | Cap (W)       | 19880    | 27000   | 38100   | 44800   | 56000   | 67200   |
|                  |                           | Input (KW)    | 12.4     | 16.9    | 23.4    | 27.8    | 34.5    | 42.2    |
|                  | Te<br>-30°C               | Cap (W)       | 14740    | 20000   | 28760   | 34000   | 42400   | 51600   |
|                  |                           | Input (KW)    | 10.6     | 14.5    | 20.4    | 24.2    | 29.94   | 36.9    |
|                  | Te<br>-35°C               | Cap (W)       | 10600    | 14400   | 21100   | 25240   | 31140   | 38580   |
|                  |                           | Input (KW)    | 8.9      | 12.0    | 17.4    | 20.7    | 25.42   | 31.8    |
|                  | Te<br>-40°C               | Cap (W)       | 7320     | 9960    | 14880   | 18100   | 22000   | 28000   |
|                  |                           | Input (KW)    | 7.3      | 9.8     | 14.6    | 17.4    | 21.02   | 26.9    |
| Conn             | Liquid outlet Connect(mm) |               | φ 54     | φ 54    | φ 54    | φ 66    | φ 66    | φ 76    |
|                  | Gas Connect (mm)          |               | φ 22     | φ 22    | φ 22    | φ 28    | φ 28    | φ 28    |
| Overall Size     | L(mm)                     |               | 2300     | 2300    | 2300    | 2300    | 2300    | 2300    |
|                  | W(mm)                     |               | 1250     | 1250    | 1250    | 1250    | 1250    | 1250    |
|                  | H(mm)                     |               | 1850     | 1850    | 1850    | 1850    | 1850    | 1850    |

Above cooling capacity and input power under condition of condensing Temp. 40 °C

##### 4.2.2.2 Water cooled Low Temp 3 compressor rack

| Model            |                           | BBS3—         |          |         |         |         |         |         |
|------------------|---------------------------|---------------|----------|---------|---------|---------|---------|---------|
|                  |                           | 27LB          | 42LB     | 54LB    | 69LB    | 84LB    | 102LB   | 132LB   |
| Temperature( °C) |                           | -15°C~30°C    |          |         |         |         |         |         |
| Refrigerant      |                           | R404A/R507A   |          |         |         |         |         |         |
| Power supply     |                           | 380V/50HZ     |          |         |         |         |         |         |
| Comp.            | Type                      | Semi-hermetic |          |         |         |         |         |         |
|                  | Comp. Model               | 4TES-9Y       | 4NES-14Y | 4HE-18Y | 4GE-23Y | 6HE-28Y | 6GE-34Y | 6FE-44Y |
|                  | Qty                       | 3             | 3        | 3       | 3       | 3       | 3       | 3       |
| Condenser        | Liquid outlet Connect(mm) | Shell & Tube  |          |         |         |         |         |         |
|                  | Gas Connect (mm)          | 11            | 15       | 21      | 24      | 29      | 36      | 43.5    |
|                  | Liquid outlet Connect(mm) | 2-1/2"        | 2-1/2"   | 2-1/2"  | 2-1/2"  | 3"      | 3"      | 3"      |
| Cap. & Watt      | Te<br>-25°C               | Cap (W)       | 29800    | 40560   | 57150   | 67200   | 84000   | 100800  |
|                  |                           | Input (KW)    | 18.6     | 25.4    | 35.2    | 41.6    | 51.75   | 63.3    |
|                  | Te<br>-30°C               | Cap (W)       | 22100    | 30000   | 43140   | 51000   | 63600   | 77400   |
|                  |                           | Input (KW)    | 15.9     | 21.7    | 30.6    | 36.3    | 44.91   | 55.4    |
|                  | Te<br>-35°C               | Cap (W)       | 15900    | 21660   | 31650   | 37860   | 46710   | 57870   |
|                  |                           | Input (KW)    | 13.3     | 18.1    | 26.1    | 31.0    | 38.13   | 47.7    |
|                  | Te<br>-40°C               | Cap (W)       | 11000    | 14940   | 22300   | 27150   | 33000   | 41970   |
|                  |                           | Input (KW)    | 10.89    | 14.6    | 21.8    | 26.0    | 31.53   | 40.4    |
| Conn             | Liquid outlet Connect(mm) |               | φ 54     | φ 54    | φ 66    | φ 76    | φ 76    | φ 108   |
|                  | Gas Connect (mm)          |               | φ 22     | φ 22    | φ 28    | φ 28    | φ 28    | φ 35    |
| Overall Size     | L(mm)                     |               | 2950     | 2950    | 2950    | 2950    | 2950    | 2950    |
|                  | W(mm)                     |               | 1250     | 1250    | 1250    | 1250    | 1250    | 1250    |
|                  | H(mm)                     |               | 1850     | 1850    | 1850    | 1850    | 1850    | 1850    |

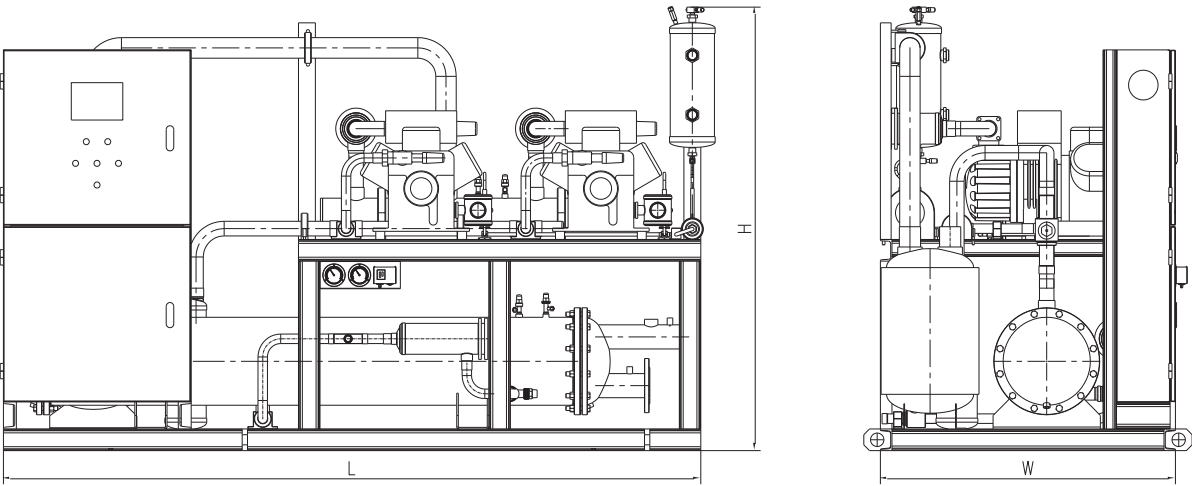
Above cooling capacity and input power under condition of condensing Temp. 40 °C

#### 4.2.2.3 Water cooled Low Temp 4 compressor rack

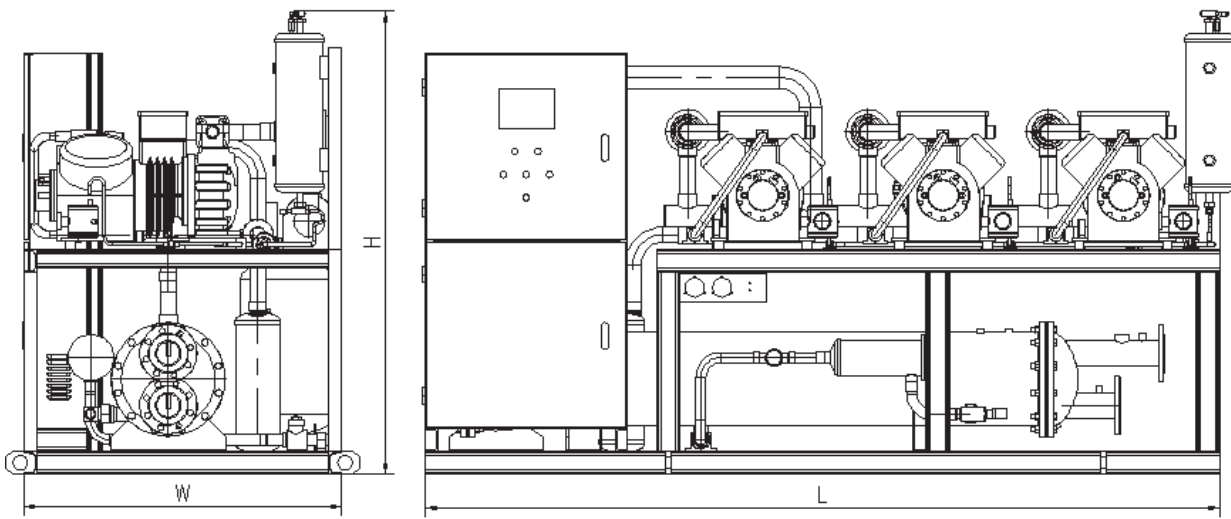
| Model            |                           | BBS4—         |          |         |         |         |         |         |
|------------------|---------------------------|---------------|----------|---------|---------|---------|---------|---------|
|                  |                           | 36LBY         | 56LBY    | 72LBY   | 92LBY   | 112LBY  | 136LBY  | 176LBY  |
| Temperature( °C) |                           | -15℃~-30℃     |          |         |         |         |         |         |
| Refrigerant      |                           | R404A/R507A   |          |         |         |         |         |         |
| Power supply     |                           | 380V/50HZ     |          |         |         |         |         |         |
| Comp.            | Type                      | Semi-hermetic |          |         |         |         |         |         |
|                  | Comp. Model               | 4TES-9Y       | 4NES-14Y | 4HE-18Y | 4GE-23Y | 6HE-28Y | 6GE-34Y | 6FE-44Y |
|                  | Qty                       | 4             | 4        | 4       | 4       | 4       | 4       | 4       |
| Condenser        | Liquid outlet Connect(mm) | Shell & Tube  |          |         |         |         |         |         |
|                  | Gas Connect (mm)          | 15            | 20       | 28      | 32      | 40      | 48      | 58      |
|                  | Liquid outlet Connect(mm) | 2-1/2"        | 2-1/2"   | 3"      | 3"      | 3"      | 4"      | 4"      |
| Cap. & Watt      | Te -25℃                   | Cap (W)       | 39760    | 54000   | 76200   | 89600   | 112000  | 160400  |
|                  |                           | Input (KW)    | 24.8     | 33.8    | 46.9    | 55.5    | 69.0    | 102.0   |
|                  | Te -30℃                   | Cap (W)       | 29480    | 40000   | 57520   | 68000   | 84800   | 122000  |
|                  |                           | Input (KW)    | 21.2     | 28.9    | 40.8    | 48.4    | 59.88   | 89.6    |
|                  | Te -35℃                   | Cap (W)       | 21200    | 28880   | 42200   | 50480   | 62280   | 90800   |
|                  |                           | Input (KW)    | 17.8     | 24.1    | 34.8    | 41.4    | 50.84   | 77.0    |
|                  | Te -40℃                   | Cap (W)       | 14640    | 19920   | 29760   | 36200   | 44000   | 55960   |
|                  |                           | Input (KW)    | 14.5     | 19.5    | 29.1    | 34.7    | 42.04   | 53.8    |
| Connector        | Liquid outlet Connect(mm) |               | φ66      | φ66     | φ76     | φ76     | φ108    | φ108    |
|                  | Gas Connect (mm)          |               | φ22      | φ28     | φ28     | φ28     | φ35     | φ35     |
| Overall Size     | L(mm)                     |               | 3600     | 3600    | 3600    | 3600    | 3600    | 3600    |
|                  | W(mm)                     |               | 1250     | 1250    | 1250    | 1250    | 1250    | 1250    |
|                  | H(mm)                     |               | 1850     | 1850    | 1850    | 1850    | 1850    | 1850    |

Above cooling capacity and input power under condition of condensing Temp. 40 °C

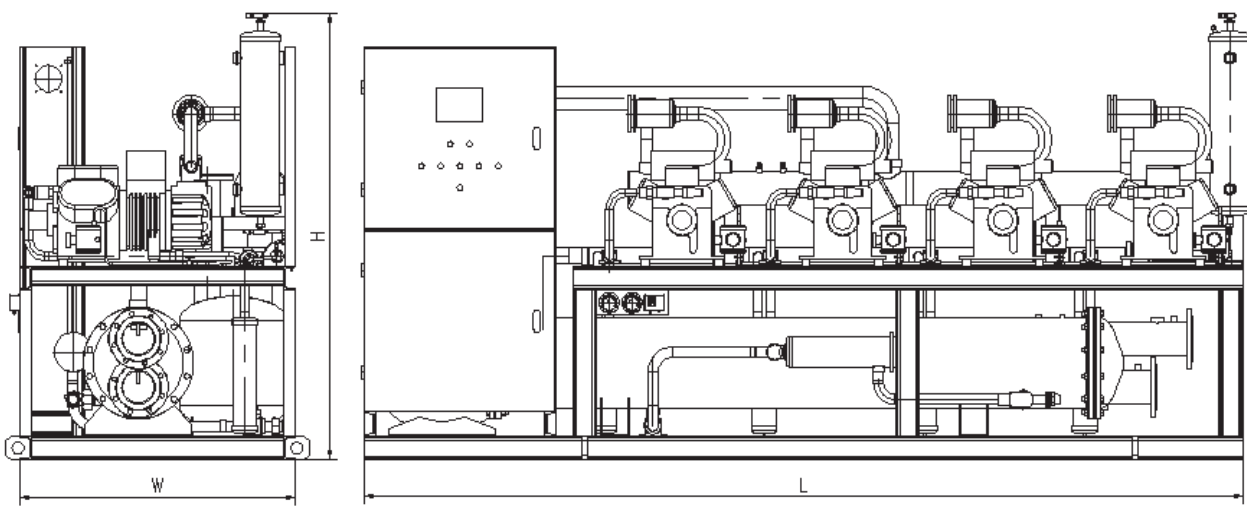
4.Diagrams for Air Cooled Rack Overall sizes



2 Compressor Rack



3 Compressor Rack



4 Compressor Rack

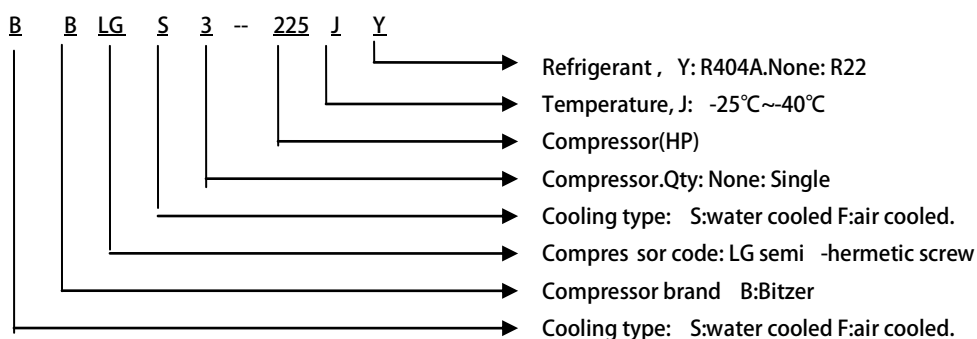
## BBLG Series Low Temperature Screw Compressor racks

### 1. Product description

This BBLG series products are applicable to the large size  $-25^{\circ}\text{C}\sim 40^{\circ}\text{C}$  low temperature refrigeration system, as the large size low temperature cold rooms, ice making, and blast freezing etc., with the features of ;

- ◆ German Bitzer semi-hermetic, low temperature screw compressor, with the features of high efficiency, long service life, tiny vibration and low noise
- ◆ All this series products have a complete set of world famous components, protection devices for compressor wrong direction, over heat, over load, over discharging temperature, low oil level, over high/low pressure of oil flow etc.
- ◆ The product is matched with economizer, which can effectively increase the capacity for low temperature operation.

### 2. Model code



### 3. Main components

- Low temp. screw machine
- Oil separator
- Oil cooler
- Oil circuit assembly
- Receiver
- unit control box(PLC + touch panel)
- Liquid pipe Filter
- Sight glasses
- Economizer assembly
- Suction Filter
- Pressure protector
- Pressure gauge
- Condenser(only for water-cooling unit)

Air-cooling Condenser or Evaporating Condenser is optional!



## 4. Specifications:

### 4.1 Water Cooled Compressor Racks

#### 4.1.1 Refrigerant R22

| Model            |                        | BLGS-50J              | BLGS-60J   | BLGS-70J   | BLGS-75J   | BLGS-125J   | BLGS-160J   |
|------------------|------------------------|-----------------------|------------|------------|------------|-------------|-------------|
| Temperature( °C) |                        | -25°C~-40°C           |            |            |            |             |             |
| Power            |                        | 380V/50HZ             |            |            |            |             |             |
| Comp.            | Type                   | Semi-Hermetic Screw   |            |            |            |             |             |
|                  | Comp. Model            | HSN6461-50            | HSN7451-60 | HSN7461-70 | HSN7471-75 | HSN8571-125 | HSN8591-160 |
|                  | Qty.                   | 1                     | 1          | 1          | 1          | 1           | 1           |
| Condenser        | Type                   | Shell and Copper Pipe |            |            |            |             |             |
|                  | Cooling Water (m³/h)   | 18                    | 23         | 26         | 28         | 45          | 55          |
|                  | Water Pipe Size (inch) | 2 "                   | 2-1/2 "    | 2-1/2 "    | 2-1/2 "    | 3 "         | 3 "         |
| Cap & Watt       | Te<br>-35°C            | Cap (KW)              | 42.3       | 50.7       | 58.1       | 63.1        | 106.6       |
|                  |                        | Input (KW)            | 32.8       | 40.3       | 44.7       | 47.6        | 74.6        |
|                  | Te<br>-40°C            | Cap (KW)              | 33.3       | 39.5       | 45.8       | 49.8        | 84.7        |
|                  |                        | Input (KW)            | 31.5       | 39         | 43.1       | 45.9        | 70.9        |
|                  | Te<br>-45°C            | Cap (KW)              | 25.5       | 29.5       | 35.1       | 38.3        | 65.7        |
|                  |                        | Input (KW)            | 30.2       | 37.8       | 41.5       | 44.1        | 66.9        |
| Connect          | Gas In (mm)            |                       | φ 54       | φ 76       | φ 76       | φ 76        | φ 108       |
|                  | Liquid dia. (mm)       |                       | φ 28       | φ 28       | φ 28       | φ 28        | φ 35        |
| Overall sizes    | L (mm)                 |                       | 1800       | 1800       | 1800       | 2000        | 2250        |
|                  | W (mm)                 |                       | 1050       | 1050       | 1050       | 1050        | 1100        |
|                  | H(mm)                  |                       | 1300       | 1300       | 1300       | 1300        | 1730        |

Condensing Temp. at 40 °C.

| Model           |                        | BBLGS2-100J           | BBLGS2-120J | BBLGS2-140J | BBLGS2-150J | BBLGS2-250J | BBLGS2-320J |
|-----------------|------------------------|-----------------------|-------------|-------------|-------------|-------------|-------------|
| Temperature(°C) |                        | -25°C~-40°C           |             |             |             |             |             |
| Power           |                        | 380V/50HZ             |             |             |             |             |             |
| Comp.           | Type                   | Semi-Hermetic Screw   |             |             |             |             |             |
|                 | Comp. Model            | HSN6461-50            | HSN7451-60  | HSN7461-70  | HSN7471-75  | HSN8571-125 | HSN8591-160 |
|                 | Qty.                   | 2                     | 2           | 2           | 2           | 2           | 2           |
| Condenser       | Type                   | Shell and Copper Pipe |             |             |             |             |             |
|                 | Cooling Water (m³/h)   | 36                    | 46          | 52          | 56          | 90          | 110         |
|                 | Water Pipe Size (inch) | 2-1/2 "               | 3 "         | 3 "         | 3 "         | 4 "         | 5 "         |
| Cap & Watt      | Te<br>-35°C            | Cap (KW)              | 84.6        | 101.4       | 116.2       | 126.2       | 213.2       |
|                 |                        | Input (KW)            | 65.6        | 80.6        | 89.4        | 95.2        | 149.2       |
|                 | Te<br>-40°C            | Cap (KW)              | 66.6        | 79          | 91.6        | 99.6        | 169.4       |
|                 |                        | Input (KW)            | 63          | 78          | 86.2        | 91.8        | 141.8       |
|                 | Te<br>-45°C            | Cap (KW)              | 51          | 59.6        | 70.2        | 76.6        | 131.4       |
|                 |                        | Input (KW)            | 60.4        | 75.6        | 83          | 88.2        | 133.8       |
| Connect         | Gas In (mm)            |                       | φ 108       | φ 108       | φ 108       | φ 108       | φ 159       |
|                 | Liquid dia. (mm)       |                       | φ 35        | φ 42        | φ 42        | φ 42        | φ 54        |
| Overall sizes   | L (mm)                 |                       | 2400        | 2400        | 2400        | 2400        | 2400        |
|                 | W (mm)                 |                       | 1880        | 1880        | 1880        | 1880        | 2150        |
|                 | H(mm)                  |                       | 2100        | 2100        | 2100        | 2100        | 2300        |

Condensing Temp. at 40 °C.

| Model            |                        | BBLGS3-150J           | BBLGS3-180J | BBLGS3-210J | BBLGS3-225J | BBLGS3-375J |
|------------------|------------------------|-----------------------|-------------|-------------|-------------|-------------|
| Temperature( °C) |                        | -25°C~-40°C           |             |             |             |             |
| Power            |                        | 380V/50HZ             |             |             |             |             |
| Comp.            | Type                   | Semi-Hermetic Screw   |             |             |             |             |
|                  | Comp. Model            | HSN6461-50            | HSN7451-60  | HSN7461-70  | HSN7471-75  | HSN8571-125 |
|                  | Qty.                   | 3                     | 3           | 3           | 3           | 3           |
| Condenser        | Type                   | Shell and Copper Pipe |             |             |             |             |
|                  | Cooling Water (m³/h)   | 54                    | 70          | 78          | 85          | 135         |
|                  | Water Pipe Size (inch) | 3 "                   | 3 "         | 3 "         | 4 "         | 5 "         |
| Cap & Watt       | Te<br>-35°C            | Cap (KW)              | 126.9       | 152.1       | 174.3       | 319.8       |
|                  |                        | Input (KW)            | 98.4        | 120.9       | 134.2       | 223.8       |
|                  | Te<br>-40°C            | Cap (KW)              | 99.9        | 118.5       | 137.4       | 254.1       |
|                  |                        | Input (KW)            | 94.5        | 117         | 129.3       | 212.7       |
|                  | Te<br>-45°C            | Cap (KW)              | 76.5        | 89.4        | 105.3       | 197.1       |
|                  |                        | Input (KW)            | 90.6        | 113.4       | 124.5       | 200.7       |
| Connect          | Gas In (mm)            |                       | 2×φ80       | 2×φ80       | 2×φ108      | 2×φ108      |
|                  | Liquid dia. (mm)       |                       | φ42         | φ42         | φ54         | φ54         |
| Overall sizes    | L (mm)                 |                       | 3300        | 3300        | 3300        | 3300        |
|                  | W (mm)                 |                       | 1880        | 1880        | 1880        | 2150        |
|                  | H(mm)                  |                       | 2100        | 2100        | 2100        | 2300        |

Condensing Temp. at 40 °C.

| Model            |                        | BBLGS4-200J           | BBLGS4-240J | BBLGS4-280J | BBLGS4-300J |
|------------------|------------------------|-----------------------|-------------|-------------|-------------|
| Temperature( °C) |                        | -25°C~-40°C           |             |             |             |
| Power            |                        | 380V/50HZ             |             |             |             |
| Comp.            | Type                   | Semi-Hermetic Screw   |             |             |             |
|                  | Comp. Model            | HSN6461-50            | HSN7451-60  | HSN7461-70  | HSN7471-75  |
|                  | Qty.                   | 4                     | 4           | 4           | 4           |
| Condenser        | Type                   | Shell and Copper Pipe |             |             |             |
|                  | Cooling Water (m³/h)   | 70                    | 90          | 100         | 110         |
|                  | Water Pipe Size (inch) | 4"                    | 4"          | 4"          | 5"          |
| Cap & Watt       | Te<br>-35°C            | Cap (KW)              | 169.2       | 202.8       | 232.4       |
|                  |                        | Input (KW)            | 131.2       | 161.2       | 178.8       |
|                  | Te<br>-40°C            | Cap (KW)              | 133.2       | 158         | 183.2       |
|                  |                        | Input (KW)            | 126         | 156         | 172.4       |
|                  | Te<br>-45°C            | Cap (KW)              | 102         | 119.2       | 140.4       |
|                  |                        | Input (KW)            | 120.8       | 151.2       | 166         |
| Connect          | Gas In (mm)            |                       | 3×φ80       | 3×φ80       | 3×φ108      |
|                  | Liquid dia. (mm)       |                       | φ42         | φ54         | φ54         |
| Overall sizes    | L (mm)                 |                       | 4100        | 4100        | 4100        |
|                  | W (mm)                 |                       | 1880        | 1880        | 1880        |
|                  | H(mm)                  |                       | 2100        | 2100        | 2100        |

Condensing Temp. at 40 °C.

#### 4.1.2 Refrigerant R404A/R507A:

| Model            |                        | BLGS-50JY             | BLGS-60JY  | BLGS-70JY  | BLGS-75JY  | BLGS-125JY  | BLGS-160JY  |
|------------------|------------------------|-----------------------|------------|------------|------------|-------------|-------------|
| Temperature( °C) |                        | -25°C~40°C            |            |            |            |             |             |
| Power            |                        | 380V/50HZ             |            |            |            |             |             |
| Comp.            | Type                   | Semi-Hermetic Screw   |            |            |            |             |             |
|                  | Comp. Model            | HSN6461-50            | HSN7451-60 | HSN7461-70 | HSN7471-75 | HSN8571-125 | HSN8591-160 |
|                  | Qty.                   | 1                     | 1          | 1          | 1          | 1           | 1           |
| Condenser        | Type                   | Shell and Copper Pipe |            |            |            |             |             |
|                  | Cooling Water (m³/h)   | 18                    | 23         | 26         | 28         | 45          | 55          |
|                  | Water Pipe Size (inch) | 2-1/2 "               | 2-1/2 "    | 2-1/2 "    | 2-1/2 "    | 3 "         | 3 "         |
| Cap & Watt       | Te -35°C               | Cap (KW)              | 46.7       | 55.7       | 63.9       | 67.7        | 111.2       |
|                  |                        | Input (KW)            | 39.0       | 48.9       | 51.5       | 55.5        | 87.5        |
|                  | Te -40°C               | Cap (KW)              | 37.5       | 44.2       | 51.0       | 54.5        | 89.4        |
|                  |                        | Input (KW)            | 37.2       | 47.6       | 49.6       | 53.0        | 83.9        |
|                  | Te -45°C               | Cap (KW)              | 29.5       | 34.2       | 39.9       | 43.0        | 70.5        |
|                  |                        | Input (KW)            | 35.4       | 46.1       | 47.7       | 50.7        | 80.7        |
| Connect          | Gas In (mm)            |                       | φ54        | φ76        | φ76        | φ76         | φ108        |
|                  | Liquid dia. (mm)       |                       | φ28        | φ28        | φ28        | φ28         | φ35         |
| Overall sizes    | L (mm)                 |                       | 1800       | 1800       | 1800       | 2000        | 2250        |
|                  | W (mm)                 |                       | 1050       | 1050       | 1050       | 1050        | 1100        |
|                  | H(mm)                  |                       | 1300       | 1300       | 1300       | 1300        | 1730        |
|                  |                        |                       |            |            |            |             |             |

Condensing Temp. at 40 °C.

| Model            |                        | BBLGS2-100JY          | BBLGS2-120JY | BBLGS2-140JY | BBLGS2-150JY | BBLGS2-250JY | BBLGS2-320JY |
|------------------|------------------------|-----------------------|--------------|--------------|--------------|--------------|--------------|
| Temperature( °C) |                        | -25°C~40°C            |              |              |              |              |              |
| Power            |                        | 380V/50HZ             |              |              |              |              |              |
| Comp.            | Type                   | Semi-Hermetic Screw   |              |              |              |              |              |
|                  | Comp. Model            | HSN6461-50            | HSN7451-60   | HSN7461-70   | HSN7471-75   | HSN8571-125  | HSN8591-160  |
|                  | Qty.                   | 2                     | 2            | 2            | 2            | 2            | 2            |
| Condenser        | Type                   | Shell and Copper Pipe |              |              |              |              |              |
|                  | Cooling Water (m³/h)   | 36                    | 46           | 52           | 56           | 90           | 110          |
|                  | Water Pipe Size (inch) | 3 "                   | 3 "          | 3 "          | 3 "          | 5 "          | 5 "          |
| Cap & Watt       | Te -35°C               | Cap (KW)              | 93.4         | 111.4        | 127.8        | 135.4        | 222.4        |
|                  |                        | Input (KW)            | 78.0         | 97.8         | 103.0        | 111.0        | 175.0        |
|                  | Te -40°C               | Cap (KW)              | 75.0         | 88.4         | 102.0        | 109.0        | 178.8        |
|                  |                        | Input (KW)            | 74.4         | 95.2         | 99.2         | 106.0        | 167.8        |
|                  | Te -45°C               | Cap (KW)              | 59.0         | 68.4         | 79.8         | 86.0         | 141          |
|                  |                        | Input (KW)            | 70.8         | 92.2         | 95.4         | 101.4        | 161.4        |
| Connect          | Gas In (mm)            |                       | φ108         | φ108         | φ108         | φ108         | φ159         |
|                  | Liquid dia. (mm)       |                       | φ35          | φ42          | φ42          | φ42          | φ54          |
| Overall sizes    | L (mm)                 |                       | 2400         | 2400         | 2400         | 2400         | 2400         |
|                  | W (mm)                 |                       | 1880         | 1880         | 1880         | 1880         | 2150         |
|                  | H(mm)                  |                       | 2100         | 2100         | 2100         | 2100         | 2300         |
|                  |                        |                       |              |              |              |              |              |

Condensing Temp. at 40 °C.

| Model            |                      |            | BBLGS3-150JY          | BBLGS3-180JY | BBLGS3-210JY | BBLGS3-225JY | BBLGS3-375JY |
|------------------|----------------------|------------|-----------------------|--------------|--------------|--------------|--------------|
| Temperature( °C) |                      |            | -25℃~-40℃             |              |              |              |              |
| Power            |                      |            | 380V/50HZ             |              |              |              |              |
| Comp.            | Type                 |            | Semi-Hermetic Screw   |              |              |              |              |
|                  | Comp. Model          |            | HSN6461-50            | HSN7451-60   | HSN7461-70   | HSN7471-75   | HSN8571-125  |
|                  | Qty.                 |            | 3                     | 3            | 3            | 3            | 3            |
| Condenser        | Type                 |            | Shell and Copper Pipe |              |              |              |              |
|                  | Cooling Water(m ³/h) |            | 54                    | 70           | 78           | 85           | 135          |
|                  | Water Pipe (inch)    |            | 3″                    | 4″           | 4″           | 4″           | 5″           |
| Cap & Watt       | Te<br>-35℃           | Cap (KW)   | 140.1                 | 176.1        | 191.7        | 203.1        | 333.6        |
|                  |                      | Input (KW) | 117.0                 | 146.7        | 154.5        | 166.5        | 262.5        |
|                  | Te<br>-40℃           | Cap (KW)   | 112.5                 | 132.6        | 153.0        | 163.5        | 268.2        |
|                  |                      | Input (KW) | 111.6                 | 142.8        | 148.8        | 159.0        | 251.7        |
|                  | Te<br>-45℃           | Cap (KW)   | 88.5                  | 102.6        | 119.7        | 129.0        | 211.5        |
|                  |                      | Input (KW) | 106.2                 | 138.3        | 143.1        | 152.1        | 242.1        |
| Conne<br>ct      | Gas In (mm)          |            | 2×φ80                 | 2×φ80        | 2×φ108       | 2×φ108       | 2×φ133       |
|                  | Liquid dia. (mm)     |            | φ42                   | Φ42          | Φ42          | φ54          | φ54          |
| Overall<br>sizes | L (mm)               |            | 3300                  | 3300         | 3300         | 3300         | 3300         |
|                  | W (mm)               |            | 1880                  | 1880         | 1880         | 1880         | 2150         |
|                  | H(mm)                |            | 2100                  | 2100         | 2100         | 2100         | 2300         |

Condensing Temp. at 40 °C.

| Model            |                        |            | BBLGS4-200JY          | BBLGS4-240JY | BBLGS4-280JY | BBLGS4-300JY |
|------------------|------------------------|------------|-----------------------|--------------|--------------|--------------|
| Temperature( °C) |                        |            | -25℃~-40℃             |              |              |              |
| Power            |                        |            | 380V/50HZ             |              |              |              |
| Comp.            | Type                   |            | Semi-Hermetic Screw   |              |              |              |
|                  | Comp. Model            |            | HSN6461-50            | HSN7451-60   | HSN7461-70   | HSN7471-75   |
|                  | Qty.                   |            | 4                     | 4            | 4            | 4            |
| Condenser        | Type                   |            | Shell and Copper Pipe |              |              |              |
|                  | Rated water flow(m³/h) |            | 70                    | 90           | 100          | 110          |
|                  | Cooling Water dia..    |            | 4″                    | 5″           | 5″           | 5″           |
| Cap &Watt        | Te.<br>-35℃            | Cap (KW)   | 186.8                 | 222.8        | 255.6        | 270.8        |
|                  |                        | Input (KW) | 156.0                 | 195.6        | 206.0        | 222.0        |
|                  | Te.<br>-40℃            | Cap (KW)   | 150.0                 | 176.8        | 204.0        | 218.0        |
|                  |                        | Input (KW) | 148.8                 | 190.4        | 198.4        | 212.0        |
|                  | Te.<br>-45℃            | Cap (KW)   | 118.0                 | 136.8        | 159.6        | 172.0        |
|                  |                        | Input (KW) | 141.6                 | 184.4        | 190.8        | 202.8        |
| Connector        | Gas In (mm)            |            | 3×φ80                 | 3×φ80        | 3×φ108       | 3×φ108       |
|                  | Liquid dia. (mm)       |            | φ42                   | φ54          | φ54          | φ54          |
| Overa ll sizes   | L (mm)                 |            | 4100                  | 4100         | 4100         | 4100         |
|                  | W (mm)                 |            | 1880                  | 1880         | 1880         | 1880         |
|                  | H(mm)                  |            | 2100                  | 2100         | 2100         | 2100         |

Condensing Temp. at 40 °C.

## 4.2 Air Cooled Series :

### 4.2.1 Refrigerant R22:

| Model                    |                   | BLGF-50J              | BLGF-60J   | BLGF-70J   | BLGF-75J   | BLGF-125J   | BHLGF-160J  |
|--------------------------|-------------------|-----------------------|------------|------------|------------|-------------|-------------|
| Temperature( °C)         |                   | -25°C~40°C            |            |            |            |             |             |
| Power                    |                   | 380V/50HZ             |            |            |            |             |             |
| Comp.                    | Type              | Semi-Hermetic Screw   |            |            |            |             |             |
|                          | Comp. Model       | HSN6461-50            | HSN7451-60 | HSN7461-70 | HSN7471-75 | HSN8571-125 | HSN8591-160 |
|                          | Comp. Q' ty       | 1                     | 1          | 1          | 1          | 1           | 1           |
| Condenser                | Type              | Shell and Copper Pipe |            |            |            |             |             |
|                          | Fan Voltage (V)   | 380                   | 380        | 380        | 380        | 380         | 380         |
|                          | Fan Capacity (W)  | 250×2                 | 250×2      | 250×2      | 250×2      | 800×2       | 800×2       |
| Cap & Watt               | Te. -35°C         | Cap (KW)              | 40.5       | 48.4       | 55.7       | 60.4        | 101.8       |
|                          |                   | Input (KW)            | 36.3       | 45         | 49.3       | 52.7        | 82.3        |
|                          | Te. -40°C         | Cap (KW)              | 31.7       | 37.4       | 43.5       | 47.4        | 80.2        |
|                          |                   | Input (KW)            | 34.9       | 43.5       | 47.5       | 50.8        | 77.8        |
|                          | Te. -45°C         | Cap (KW)              | 24         | 27.9       | 33         | 36.1        | 61.4        |
|                          |                   | Input (KW)            | 33.4       | 42         | 45.6       | 48.8        | 72.9        |
| Connect<br>Overall sizes | Gas Suction (mm)  |                       | φ54        | φ76        | φ76        | φ76         | φ108        |
|                          | Liquid dia. (mm)  |                       | φ28        | φ28        | φ28        | φ28         | φ35         |
|                          | Gas out dia.(mm)  |                       | φ42        | φ54        | φ54        | φ54         | φ76         |
|                          | Liquid inlet (mm) |                       | φ28        | φ35        | φ35        | φ35         | φ42         |
| Overall<br>size          | L (mm)            |                       | 1750       | 1750       | 1750       | 1750        | 2150        |
|                          | W (mm)            |                       | 1250       | 1250       | 1250       | 1250        | 1400        |
|                          | H(mm)             |                       | 1640       | 1640       | 1640       | 1640        | 1870        |

Condensing Temp. at 45 °C.

| Model                    |                   | BBLGF2-100J           | BBLGF2-120J | BBLGF2-140J | BBLGF2-150J | BBLGF2-250J | BBLGF2-320J |
|--------------------------|-------------------|-----------------------|-------------|-------------|-------------|-------------|-------------|
| Temperature( °C)         |                   | -25°C~40°C            |             |             |             |             |             |
| Power                    |                   | 380V/50HZ             |             |             |             |             |             |
| Comp.                    | Type              | Semi-Hermetic Screw   |             |             |             |             |             |
|                          | Comp. Model       | HSN6461-50            | HSN7451-60  | HSN7461-70  | HSN7471-75  | HSN8571-125 | HSN8591-160 |
|                          | Comp. Q' ty       | 2                     | 2           | 2           | 2           | 2           | 2           |
| Condenser                | Type              | Shell and Copper Pipe |             |             |             |             |             |
|                          | Fan Voltage (V)   | 380                   | 380         | 380         | 380         | 380         | 380         |
|                          | Fan Capacity (W)  | 800×2                 | 800×2       | 800×2       | 800×2       | 800×3       | 800×4       |
| Cap & Watt               | Te. -35°C         | Cap (KW)              | 81          | 96.8        | 111.4       | 120.8       | 203.6       |
|                          |                   | Input (KW)            | 72.6        | 90          | 98.6        | 105.4       | 164.6       |
|                          | Te. -40°C         | Cap (KW)              | 63.4        | 74.8        | 87          | 94.8        | 160.4       |
|                          |                   | Input (KW)            | 69.8        | 87          | 95          | 101.6       | 155.6       |
|                          | Te. -45°C         | Cap (KW)              | 48          | 55.8        | 66          | 72.2        | 122.8       |
|                          |                   | Input (KW)            | 66.8        | 84          | 91.2        | 97.6        | 145.8       |
| Connect<br>Overall sizes | Gas Suction (mm)  |                       | φ108        | φ108        | φ108        | φ108        | φ159        |
|                          | Liquid dia. (mm)  |                       | φ35         | φ42         | φ42         | φ42         | φ54         |
|                          | Gas out dia.(mm)  |                       | φ76         | φ76         | φ76         | φ76         | φ108        |
|                          | Liquid inlet (mm) |                       | φ42         | φ54         | φ54         | φ54         | φ66         |
| Overall<br>size          | L (mm)            |                       | 2650        | 2650        | 2650        | 2650        | 3450        |
|                          | W (mm)            |                       | 1880        | 1880        | 1880        | 1880        | 2020        |
|                          | H(mm)             |                       | 2100        | 2100        | 2100        | 2100        | 2300        |

Condensing Temp. at 45 °C.



| Model            |                   | BBLGF3-150J           | BBLGF3-180J | BBLGF3-210J | BBLGF3-225J | BBLGF3-375J |
|------------------|-------------------|-----------------------|-------------|-------------|-------------|-------------|
| Temperature( °C) |                   | -25°C~-40°C           |             |             |             |             |
| Power            |                   | 380V/50HZ             |             |             |             |             |
| Comp.            | Type              | Semi-Hermetic Screw   |             |             |             |             |
|                  | Comp. Model       | HSN6461-50            | HSN7451-60  | HSN7461-70  | HSN7471-75  | HSN8571-125 |
|                  | Comp. Q' ty       | 3                     | 3           | 3           | 3           | 3           |
| Condenser        | Type              | Shell and Copper Pipe |             |             |             |             |
|                  | Fan Voltage (V)   | 380                   | 380         | 380         | 380         | 380         |
|                  | Fan Capacity (W)  | 800×2                 | 800×3       | 800×3       | 800×3       | 800×4       |
| Cap & Watt       | Te. -35°C         | Cap (KW)              | 121.5       | 145.2       | 167.1       | 181.2       |
|                  |                   | Input (KW)            | 108.9       | 135         | 147.9       | 158.1       |
|                  | Te. -40°C         | Cap (KW)              | 95.1        | 112.2       | 130.5       | 142.2       |
|                  |                   | Input (KW)            | 104.7       | 130.5       | 142.5       | 152.4       |
|                  | Te. -45°C         | Cap (KW)              | 72          | 83.7        | 99          | 108.3       |
|                  |                   | Input (KW)            | 100.2       | 126         | 136.8       | 146.4       |
| Connector        | Gas Suction (mm)  |                       | 2×φ80       | 2×φ80       | 2×φ108      | 2×φ108      |
|                  | Liquid dia. (mm)  |                       | φ42         | φ42         | φ42         | φ54         |
|                  | Gas out dia.(mm)  |                       | φ76         | φ76         | φ76         | φ108        |
|                  | Liquid inlet (mm) |                       | φ54         | φ54         | φ54         | φ54         |
| Overall size     | L (mm)            |                       | 3450        | 3450        | 3450        | 4250        |
|                  | W (mm)            |                       | 1900        | 1900        | 1900        | 2020        |
|                  | H(mm)             |                       | 2100        | 2100        | 2100        | 2300        |

Condensing Temp. at 45 °C.

| Model                  |                   | BBLGF4-200J           | BBLGF4-240J    | BBLGF4-280J    | BBLGF4-300J    |
|------------------------|-------------------|-----------------------|----------------|----------------|----------------|
| Temperature( °C)       |                   | -25°C~-40°C           |                |                |                |
| Power                  |                   | 380V/50HZ             |                |                |                |
| Comp.                  | Type              | Semi-Hermetic Screw   |                |                |                |
|                        | Comp. Model       | HSN6461-50            | HSN7451-60     | HSN7461-70     | HSN7471-75     |
|                        | Qty.              | 4                     | 4              | 4              | 4              |
| Condenser              | Type              | Shell and Copper Pipe |                |                |                |
|                        | Fan Voltage (V)   | 380                   | 380            | 380            | 380            |
|                        | Fan Capacity (W)  | 800×3                 | 800×4          | 800×4          | 800×4          |
| Cap & Watt             | Te. -35°C         | Cap (KW)              | 162            | 193.6          | 222.8          |
|                        |                   | Input (KW)            | 145.2          | 180            | 197.2          |
|                        | Te. -40°C         | Cap (KW)              | 126.8          | 149.6          | 174            |
|                        |                   | Input (KW)            | 139.6          | 174            | 190            |
|                        | Te. -45°C         | Cap (KW)              | 96             | 111.6          | 132            |
|                        |                   | Input (KW)            | 133.6          | 168            | 182.4          |
| Connector              | Gas Suction (mm)  |                       | 3×φ80          | 3×φ80          | 3×φ108         |
|                        | Liquid dia. (mm)  |                       | φ42            | φ54            | φ54            |
|                        | Gas out dia. (mm) |                       | φ76            | φ108           | φ108           |
|                        | Liquid inlet (mm) |                       | φ54            | φ54            | φ54            |
| Overall size L×W×H(mm) |                   | 4250×1900×2100        | 4250×1900×2100 | 4250×1900×2100 | 4250×1900×2100 |

Condensing Temp. at 45 °C.

#### 4.2.2 Refrigerant R404A/R507A:

| Model            |                   | BLGF-50JY           | BLGF-60JY  | BLGF-70JY  | BLGF-75JY  | BLGF-125JY  | BHLGF-160JY |
|------------------|-------------------|---------------------|------------|------------|------------|-------------|-------------|
| Temperature( °C) |                   | -25°C~-40°C         |            |            |            |             |             |
| Power            |                   | 380V/50HZ           |            |            |            |             |             |
| Comp.            | Type              | Semi-Hermetic Screw |            |            |            |             |             |
|                  | Comp. Model       | HSN6461-50          | HSN7451-60 | HSN7461-70 | HSN7471-75 | HSN8571-125 | HSN8591-160 |
|                  | Comp. Q' ty       | 1                   | 1          | 1          | 1          | 1           | 1           |
| Oil cooler       | Type              |                     |            |            |            |             |             |
|                  | Fan Voltage (V)   | 380                 | 380        | 380        | 380        | 380         | 380         |
|                  | Fan Capacity (W)  | 250                 | 250        | 250        | 250        | 250×2       | 800×2       |
| Cap & Watt       | Te. -35°C         | Cap (KW)            | 44.5       | 52.7       | 60.7       | 64.1        | 103.6       |
|                  |                   | Input (KW)          | 43.4       | 54.7       | 57.6       | 61.5        | 96.2        |
|                  | Te. -40°C         | Cap (KW)            | 35.6       | 41.7       | 48.4       | 51.5        | 82.8        |
|                  |                   | Input (KW)          | 41.5       | 53.4       | 55.6       | 59.1        | 92.2        |
|                  | Te. -45°C         | Cap (KW)            | 27.9       | 32.2       | 37.8       | 40.5        | 64.6        |
|                  |                   | Input (KW)          | 39.8       | 51.9       | 53.4       | 56.8        | 88.2        |
| Connector        | Gas Suction (mm)  |                     | φ54        | φ76        | φ76        | φ76         | φ108        |
|                  | Liquid dia. (mm)  |                     | φ28        | φ28        | φ28        | φ28         | φ35         |
|                  | Gas out dia.(mm)  |                     | φ42        | φ54        | φ54        | φ54         | φ54         |
|                  | Liquid inlet (mm) |                     | φ28        | φ35        | φ35        | φ35         | φ42         |
| Overall Size     | L (mm)            |                     | 1750       | 1750       | 1750       | 1750        | 2150        |
|                  | W (mm)            |                     | 1250       | 1250       | 1250       | 1250        | 1400        |
|                  | H(mm)             |                     | 1640       | 1640       | 1640       | 1640        | 1870        |

Condensing Temp. at 45 °C.

| Model            |                   | BBLGF2-100JY             | BBLGF2-120JY | BBLGF2-140JY | BBLGF2-150JY | BBLGF2-250JY | BBLGF2-320JY |
|------------------|-------------------|--------------------------|--------------|--------------|--------------|--------------|--------------|
| Temperature( °C) |                   | -25°C~-40°C              |              |              |              |              |              |
| Power            |                   | 380V/50HZ                |              |              |              |              |              |
| Comp.            | Type              | Semi-Hermetic Screw      |              |              |              |              |              |
|                  | Comp. Model       | HSN6461-50               | HSN7451-60   | HSN7461-70   | HSN7471-75   | HSN8571-125  | HSN8591-160  |
|                  | Comp. Q' ty       | 2                        | 2            | 2            | 2            | 2            | 2            |
| Oil cooler       | Type              | Copper Tube and Alu. fin |              |              |              |              |              |
|                  | Fan Voltage (V)   | 380                      | 380          | 380          | 380          | 380          | 380          |
|                  | Fan Capacity (W)  | 250×2                    | 250×2        | 250×2        | 800×2        | 800×2        | 800×4        |
| Cap & Watt       | Te. -35°C         | Cap (KW)                 | 89.0         | 105.4        | 121.4        | 128.2        | 207.2        |
|                  |                   | Input (KW)               | 86.8         | 109.4        | 115.2        | 123.0        | 192.4        |
|                  | Te. -40°C         | Cap (KW)                 | 71.2         | 83.4         | 96.8         | 103.0        | 165.6        |
|                  |                   | Input (KW)               | 83.0         | 106.8        | 111.2        | 118.2        | 184.4        |
|                  | Te. -45°C         | Cap (KW)                 | 55.8         | 64.4         | 75.6         | 81.0         | 129.2        |
|                  |                   | Input (KW)               | 79.6         | 103.8        | 106.8        | 113.6        | 176.4        |
| Connector        | Gas Suction (mm)  |                          | φ108         | φ108         | φ108         | φ108         | φ159         |
|                  | Liquid dia. (mm)  |                          | φ35          | φ42          | φ42          | φ42          | φ54          |
|                  | Gas out dia.(mm)  |                          | φ76          | φ76          | φ76          | φ76          | φ108         |
|                  | Liquid inlet (mm) |                          | φ42          | φ54          | φ54          | φ54          | φ54          |
| Overall Size     | L (mm)            |                          | 2650         | 2650         | 2650         | 2650         | 3450         |
|                  | W (mm)            |                          | 1880         | 1880         | 1880         | 1880         | 2020         |
|                  | H(mm)             |                          | 2100         | 2100         | 2100         | 2100         | 2300         |

Condensing Temp. at 45 °C.

| Model            |                   | BBLGF3-150JY             | BBLGF3-180JY | BBLGF3-210JY | BBLGF3-225JY | BBLGF3-375JY |
|------------------|-------------------|--------------------------|--------------|--------------|--------------|--------------|
| Temperature( °C) |                   | -25°C~-40°C              |              |              |              |              |
| Power            |                   | 380V/50HZ                |              |              |              |              |
| Comp.            | Type              | Semi-Hermetic Screw      |              |              |              |              |
|                  | Comp. Model       | HSN6461-50               | HSN7451-60   | HSN7461-70   | HSN7471-75   | HSN8571-125  |
|                  | Comp. Q' ty       | 3                        | 3            | 3            | 3            | 3            |
| Oil cooler       | Type              | Copper Tube and Alu. fin |              |              |              |              |
|                  | Fan Voltage (V)   | 380                      | 380          | 380          | 380          | 380          |
|                  | Fan Capacity (W)  | 800×2                    | 800×2        | 800×2        | 800×2        | 800×3        |
| Cap & Watt       | Te. -35°C         | Cap (KW)                 | 133.5        | 158.1        | 182.1        | 192.3        |
|                  |                   | Input (KW)               | 130.2        | 164.1        | 172.8        | 184.5        |
|                  | Te. -40°C         | Cap (KW)                 | 106.8        | 125.1        | 145.2        | 154.5        |
|                  |                   | Input (KW)               | 124.5        | 160.2        | 166.8        | 177.3        |
|                  | Te. -45°C         | Cap (KW)                 | 83.7         | 96.6         | 113.4        | 121.5        |
|                  |                   | Input (KW)               | 119.4        | 155.7        | 160.2        | 170.4        |
| Connector        | Gas Suction (mm)  |                          | 2×φ80        | 2×φ80        | 2×φ108       | 2×φ108       |
|                  | Liquid dia. (mm)  |                          | φ42          | φ42          | φ42          | φ54          |
|                  | Gas out dia.(mm)  |                          | φ76          | φ76          | φ76          | φ108         |
|                  | Liquid inlet (mm) |                          | φ54          | φ54          | φ54          | φ54          |
| Overall size     | L (mm)            |                          | 3450         | 3450         | 3450         | 4250         |
|                  | W (mm)            |                          | 1900         | 1900         | 1900         | 2020         |
|                  | H(mm)             |                          | 2100         | 2100         | 2100         | 2300         |

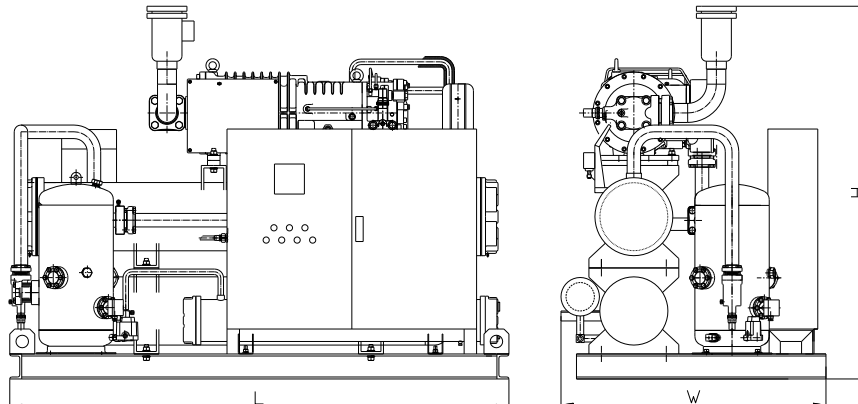
Condensing Temp. at 45 °C.

| Model                   |                   | BBLGF4-200JY             | BBLGF4-240JY   | BBLGF4-280JY   | BBLGF4-300JY   |
|-------------------------|-------------------|--------------------------|----------------|----------------|----------------|
| Temperature( °C)        |                   | -25°C~-40°C              |                |                |                |
| Power                   |                   | 380V/50HZ                |                |                |                |
| Comp.                   | Type              | Semi-Hermetic Screw      |                |                |                |
|                         | Comp. Model       | HSN6461-50               | HSN7451-60     | HSN7461-70     | HSN7471-75     |
|                         | Comp. Q' ty       | 4                        | 4              | 4              | 4              |
| Oil cooler              | Type              | Copper Tube and Alu. fin |                |                |                |
|                         | Fan Voltage (V)   | 380                      | 380            | 380            | 380            |
|                         | Fan Capacity (W)  | 800×2                    | 250×4          | 250×4          | 250×4          |
| Cap & Watt              | Te. -35°C         | Cap (KW)                 | 178.0          | 210.8          | 242.8          |
|                         |                   | Input (KW)               | 173.6          | 218.8          | 230.4          |
|                         | Te. -40°C         | Cap (KW)                 | 142.4          | 166.8          | 193.6          |
|                         |                   | Input (KW)               | 166.0          | 213.6          | 222.4          |
|                         | Te. -45°C         | Cap (KW)                 | 111.6          | 128.8          | 151.2          |
|                         |                   | Input (KW)               | 159.2          | 207.6          | 213.6          |
| Connector               | Gas Suction (mm)  |                          | 3×φ80          | 3×φ80          | 3×φ108         |
|                         | Liquid dia. (mm)  |                          | φ42            | φ54            | φ54            |
|                         | Gas out dia.(mm)  |                          | φ76            | φ108           | φ108           |
|                         | Liquid inlet (mm) |                          | φ54            | φ54            | φ54            |
| Overall size L×W×H (mm) |                   | 4250×1900×2100           | 4250×1900×2100 | 4250×1900×2100 | 4250×1900×2100 |

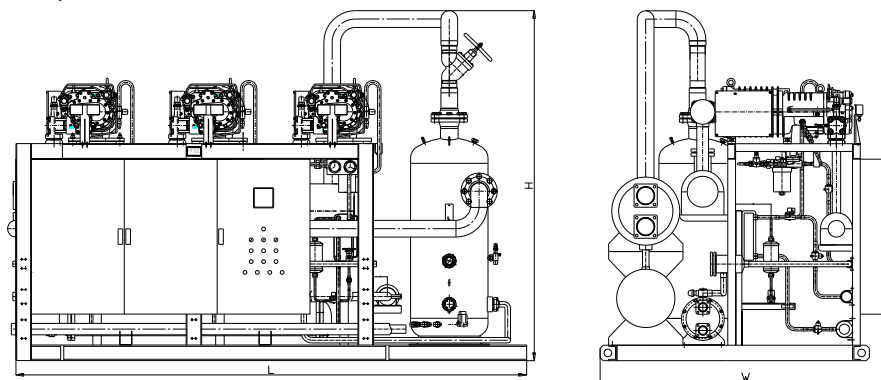
Condensing Temp. at 45 °C.

## 5. Diagrams for Overall sizes

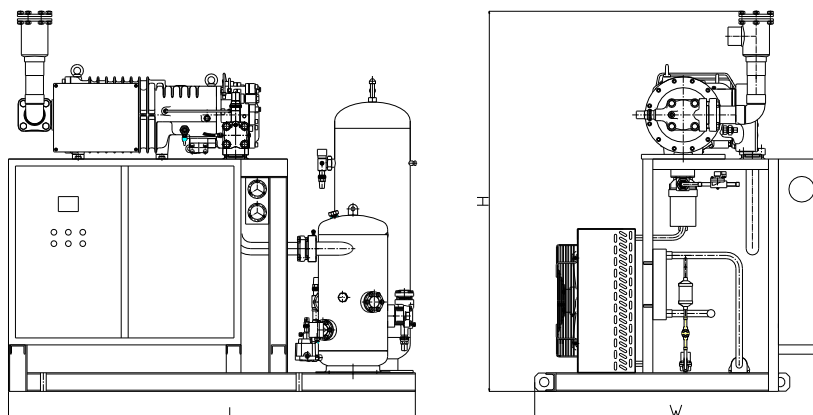
### 5.1 Water cooled single compressor



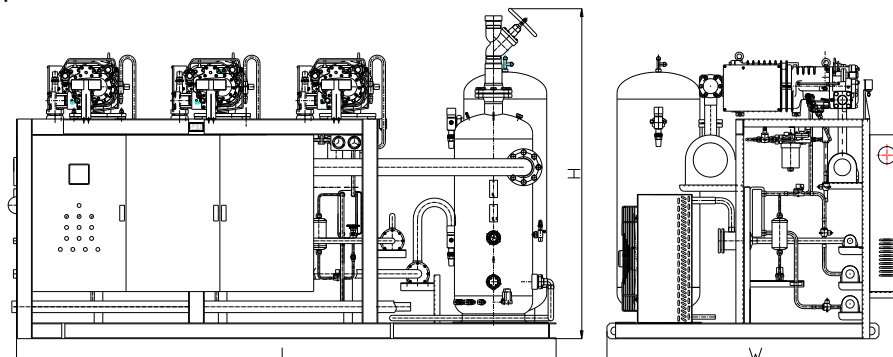
### 5.2 Water cooled multi compressors



### 5.3 Air cooled single compressor



### 5.4 Air cooled multi compressors



## BLG-M series screw condensing unit

### 1. Product description

The BLG-M series screw temperature condensing unit can meet large, used in freezers with temperature is -5~5°C.

Product features:

With BITZER CSH screw compressors, high efficiency, long life, low vibration and low noise characteristics;

Units fully equipped, with the main refrigeration and control components world famous brands and high reliability

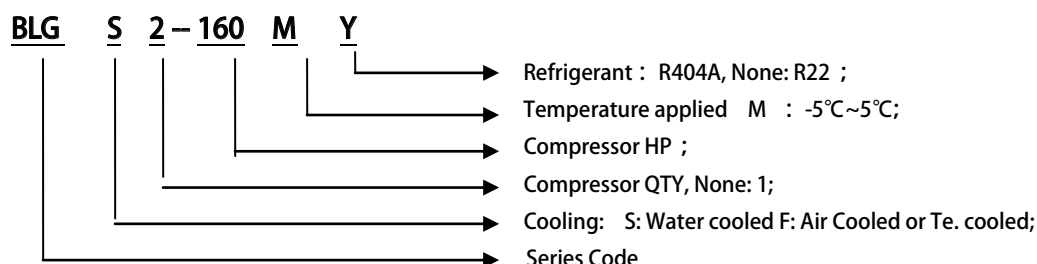
With multi protection devices for compressors wrong direction, overheating, overload, discharge temperature, oil level and high and low pressure, and thus ensuring high reliability of operation;

With CIC system, that will make the liquid line solenoid valve opens for liquid cooling when the discharge temperature exceeds the set value.

With multiple levels of capacity regulation, adapting different cooling load, reduce energy consumption;

With PLC control and touch screen, can realize remote monitoring based on user requirements.

### 2. Model code



### 3. Main components

①CSH screw compressor ②External oil separator ③Water Condenser/Liquid receiver ④Liquid line filters ⑤Oil sight glasses  
⑥Liquid injection ⑦H and L protector ⑧High pressure controller ⑨Pressure gauge ⑩Suction filters ☒Oil filter ☒Oil-solenoid valves  
☒Oil level protector ☒Unit control (PLC+ Touch screen )

Single compressor rack ①、③、④、⑤、⑥、⑦、⑧、⑨、⑩、☒、☒

2 compressor rack ①、③、④、⑤、⑥、⑦、⑧、⑨、⑩、☒、☒、☒

3 compressor rack : ①、②、③、④、⑤、⑥、⑦、⑧、⑨、⑩、☒、☒、☒、☒

Note: the Serial ③, For the water cooled condenser, no need to used liquid receiver. For the air cooled and evaporative condenser, it can be used as optional.



## 4. Specifications:

### 4.1 Water cooled

#### 4.1.1 R22 Products

| Model            |                   |            | BLG S-50M           | BLG S-60M  | BLG S-70M  | BLG S-80M  | BLG S-90M  | BLG S-100M  |
|------------------|-------------------|------------|---------------------|------------|------------|------------|------------|-------------|
| Temperature (°C) |                   |            | -5°C~5°C            |            |            |            |            |             |
| Power supply     |                   |            | 380V/50HZ           |            |            |            |            |             |
| Compressor model |                   |            | CSH6553-50          | CSH6563-60 | CSH7553-70 | CSH7563-80 | CSH7573-90 | CSH7583-100 |
| Cap. & input     | Te<br>0°C         | Cap (KW)   | 104.3               | 130.9      | 153.6      | 178.5      | 215.0      | 236.0       |
|                  |                   | Input (KW) | 29.6                | 36.8       | 44.4       | 50.1       | 57.8       | 66.2        |
|                  | Te<br>-5°C        | Cap (KW)   | 86.3                | 108.3      | 127.4      | 148.2      | 179.2      | 195.6       |
|                  |                   | input (KW) | 28.3                | 35.2       | 42.7       | 48.4       | 55.9       | 64.0        |
|                  | Te<br>-10°C       | Cap (KW)   | 70.5                | 88.5       | 104.3      | 121.5      | 147.7      | 160.4       |
|                  |                   | input (KW) | 26.9                | 33.4       | 41.3       | 47.0       | 54.2       | 62.1        |
| Condenser        | Type              |            | Shell & Copper Tube |            |            |            |            |             |
|                  | Water flow (m3/h) |            | 27                  | 34         | 40         | 46         | 55         | 60          |
|                  | Cooling Pipe Dia. |            | Rp2-1/2             | Rp3        | DN80       | DN80       | DN100      | DN100       |
| connect          | Gas in (mm)       |            | φ54                 | φ54        | φ76        | φ76        | φ76        | φ76         |
|                  | Liquid dia. (mm)  |            | φ28                 | φ28        | φ35        | φ35        | φ35        | φ35         |
| Overall sizes    | L (mm)            |            | 1610                | 2110       | 2110       | 2550       | 2550       | 2550        |
|                  | W (mm)            |            | 900                 | 900        | 900        | 900        | 900        | 900         |
|                  | H (mm)            |            | 1150                | 1150       | 1200       | 1200       | 1200       | 1200        |

Condensing temp 4 0°C

| Model            |                    |            | BLG S2-100M         | BLG S2-120M | BLG S2-140M | BLG S2-160M | BLG S2-180M | BLG S2-200M |
|------------------|--------------------|------------|---------------------|-------------|-------------|-------------|-------------|-------------|
| Temperature(°C)  |                    |            | -5°C~5°C            |             |             |             |             |             |
| Power            |                    |            | 380V/50HZ           |             |             |             |             |             |
| Compressor model |                    |            | CSH6553-50          | CSH6563-60  | CSH7553-70  | CSH7563-80  | CSH7573-90  | CSH7583-100 |
| Cap. & input     | Te<br>0°C          | Cap (KW)   | 208.6               | 261.8       | 307.2       | 357.0       | 430.0       | 472.0       |
|                  |                    | input (KW) | 59.2                | 73.6        | 88.8        | 100.2       | 115.6       | 132.4       |
|                  | Te<br>-5°C         | Cap (KW)   | 172.6               | 216.6       | 254.8       | 296.4       | 358.4       | 391.2       |
|                  |                    | input (KW) | 56.6                | 70.4        | 85.4        | 96.8        | 111.8       | 128.0       |
|                  | Te<br>-10°C        | Cap (KW)   | 141.0               | 177.0       | 208.6       | 243.0       | 295.4       | 320.8       |
|                  |                    | input (KW) | 53.8                | 66.8        | 82.6        | 94.0        | 108.4       | 124.2       |
| Condenser        | Type               |            | shell & Copper Tube |             |             |             |             |             |
|                  | Water flow (m3/h)  |            | 54                  | 67          | 80          | 91          | 110         | 120         |
|                  | Cooling Pipe Dia . |            | DN100               | DN100       | DN125       | DN125       | DN125       | DN150       |
| connect          | Gas in (mm)        |            | φ89                 | φ89         | φ108        | φ108        | φ108        | φ108        |
|                  | Liquid dia. (mm)   |            | φ35                 | φ42         | φ42         | φ42         | φ54         | φ54         |
| Overall sizes    | L (mm)             |            | 2600                | 2900        | 2900        | 3100        | 3400        | 3400        |
|                  | W (mm)             |            | 1300                | 1300        | 1300        | 1300        | 1300        | 1300        |
|                  | H (mm)             |            | 1600                | 1600        | 1700        | 1700        | 1700        | 1700        |

Condensing temp 40°C.

| Model            |                    |            | BLG S3-150M         | BLG S3-18M | BLG S3-21M | BLG S3-240M | BLG S3-270M | BLG S3-30M  |
|------------------|--------------------|------------|---------------------|------------|------------|-------------|-------------|-------------|
| Temperature(°C)  |                    |            | -5°C~5°C            |            |            |             |             |             |
| Power            |                    |            | 380V/50HZ           |            |            |             |             |             |
| Compressor model |                    |            | CSH6553-50          | CSH6563-60 | CSH7553-70 | CSH7563-80  | CSH7573-90  | CSH7583-100 |
| Cap. & input     | Te<br>0°C          | Cap (KW)   | 312.9               | 392.7      | 460.8      | 535.5       | 645.0       | 708.0       |
|                  |                    | input (KW) | 88.8                | 110.4      | 133.2      | 150.3       | 173.4       | 198.6       |
|                  | Te<br>-5°C         | Cap (KW)   | 258.9               | 324.9      | 382.2      | 444.6       | 537.6       | 586.8       |
|                  |                    | input (KW) | 84.9                | 105.6      | 128.1      | 145.2       | 167.7       | 192.0       |
|                  | Te<br>-10°C        | Cap (KW)   | 211.5               | 265.5      | 312.9      | 364.5       | 443.1       | 481.2       |
|                  |                    | input (KW) | 80.7                | 100.2      | 123.9      | 141.0       | 162.6       | 186.3       |
| Condenser        | Type               |            | shell & Copper Tube |            |            |             |             |             |
|                  | Water flow (m3/h)  |            | 80                  | 100        | 120        | 137         | 164         | 181         |
|                  | Cooling Pipe Dia . |            | DN125               | DN125      | DN150      | DN150       | DN150       | DN150       |
| connect          | Gas in (mm)        |            | 2*φ76               | 2*φ76      | 2*φ89      | 2*φ89       | 2*φ108      | 2*φ108      |
|                  | Liquid dia. (mm)   |            | φ42                 | φ54        | φ54        | φ54         | φ67         | φ67         |
| Overall sizes    | L (mm)             |            | 3000                | 3400       | 3400       | 3400        | 3600        | 3600        |
|                  | W (mm)             |            | 1960                | 1960       | 1960       | 1960        | 1960        | 1960        |
|                  | H (mm)             |            | 2000                | 2000       | 2100       | 2100        | 2100        | 2100        |

Condensing temp 40°C.

#### 4.1.2 R404A Products

| Model            |                    |            | BLG S-50MY          | BLG S-60MY  | BLG S-70MY  | BLG S-80MY  | BLG S-90MY  |
|------------------|--------------------|------------|---------------------|-------------|-------------|-------------|-------------|
| Temperature(°C)  |                    |            | -5°C~5°C            |             |             |             |             |
| Power            |                    |            | 380V/50HZ           |             |             |             |             |
| Compressor model |                    |            | CSH6553-50Y         | CSH6563-60Y | CSH7553-70Y | CSH7563-80Y | CSH7573-90Y |
| Cap. & input     | Te<br>0°C          | Cap (KW)   | 109.7               | 137.8       | 160.7       | 182.7       | 211.0       |
|                  |                    | input (KW) | 34.7                | 43.4        | 48.8        | 55.5        | 63.2        |
|                  | Te<br>-5°C         | Cap (KW)   | 89.6                | 112.6       | 130.6       | 148.6       | 172.8       |
|                  |                    | input (KW) | 34.0                | 42.3        | 47.5        | 53.2        | 61.5        |
|                  | Te<br>-10°C        | Cap (KW)   | 72.4                | 91.0        | 105.0       | 119.6       | 140.1       |
|                  |                    | input (KW) | 33.2                | 41.3        | 46.3        | 51.5        | 59.9        |
| Condenser        | Type               |            | Shell & Copper Tube |             |             |             |             |
|                  | water flow (m3/h)  |            | 29                  | 36          | 42          | 48          | 55          |
|                  | Cooling Pipe Dia . |            | Rp2-1/2             | Rp3         | DN80        | DN80        | DN100       |
| connect          | Gas in (mm)        |            | φ54                 | φ54         | φ76         | φ76         | φ76         |
|                  | Liquid dia. (mm)   |            | φ28                 | φ28         | φ35         | φ35         | φ35         |
| Overall sizes    | L (mm)             |            | 1610                | 2110        | 2110        | 2550        | 2550        |
|                  | W (mm)             |            | 900                 | 900         | 900         | 900         | 900         |
|                  | H (mm)             |            | 1150                | 1150        | 1200        | 1200        | 1200        |

Condensing temp 40°C.

| Model            |                    |            | BLG S2-100MY        | BLG S2-120MY | BLG S2-140MY | BLG S2-160MY | BLG S2-180MY |
|------------------|--------------------|------------|---------------------|--------------|--------------|--------------|--------------|
| Temperature(°C)  |                    |            | -5°C~5°C            |              |              |              |              |
| Power            |                    |            | 380V/50HZ           |              |              |              |              |
| Compressor model |                    |            | CSH6553-50Y         | CSH6563-60Y  | CSH7553-70Y  | CSH7563-80Y  | CSH7573-90Y  |
| Cap. & input     | Te<br>0°C          | Cap (KW)   | 219.4               | 275.6        | 321.4        | 365.4        | 422.0        |
|                  |                    | input (KW) | 69.4                | 86.8         | 97.6         | 111.0        | 126.4        |
|                  | Te<br>-5°C         | Cap (KW)   | 179.2               | 225.2        | 261.2        | 297.2        | 345.6        |
|                  |                    | input (KW) | 68.0                | 84.6         | 95.0         | 106.4        | 123.0        |
|                  | Te<br>-10°C        | Cap (KW)   | 144.8               | 182.0        | 210.0        | 239.2        | 280.2        |
|                  |                    | input (KW) | 66.4                | 82.6         | 92.6         | 103.0        | 118.8        |
| Condenser        | Type               |            | Shell & Copper Tube |              |              |              |              |
|                  | water flow (m3/h)  |            | 58                  | 73           | 84           | 95           | 110          |
|                  | Cooling Pipe Dia . |            | DN100               | DN100        | DN125        | DN125        | DN125        |
| connect          | Gas in (mm)        |            | φ89                 | φ89          | φ108         | φ108         | φ108         |
|                  | Liquid dia. (mm)   |            | φ35                 | φ42          | φ42          | φ42          | φ54          |
| Overall sizes    | L (mm)             |            | 2600                | 2900         | 2900         | 3100         | 3400         |
|                  | W (mm)             |            | 1300                | 1300         | 1300         | 1300         | 1300         |
|                  | H (mm)             |            | 1600                | 1600         | 1700         | 1700         | 1700         |

Condensing temp 40°C

| .Model           |                    |            | BLG S3-150MY         | BLG S3-180MY | BLG S3-210MY | BLG S3-240MY | BLG S3-270MY |
|------------------|--------------------|------------|----------------------|--------------|--------------|--------------|--------------|
| Temperature°C    |                    |            | -5°C~5°C             |              |              |              |              |
| Power            |                    |            | 380V/50HZ            |              |              |              |              |
| Compressor model |                    |            | CSH6553-50Y          | CSH6563-60Y  | CSH7553-70Y  | CSH7563-80Y  | CSH7573-90Y  |
| Cap. & input     | Te<br>0°C          | Cap (KW)   | 329.1                | 413.4        | 482.1        | 548.1        | 633.0        |
|                  |                    | input (KW) | 104.1                | 130.2        | 146.4        | 166.5        | 189.6        |
|                  | Te<br>-5°C         | Cap (KW)   | 268.8                | 337.8        | 391.8        | 445.8        | 518.4        |
|                  |                    | input (KW) | 102.0                | 126.9        | 142.5        | 159.6        | 184.5        |
|                  | Te<br>-10°C        | Cap (KW)   | 217.2                | 273.0        | 315.0        | 358.8        | 420.3        |
|                  |                    | input (KW) | 99.6                 | 123.9        | 138.9        | 154.5        | 179.7        |
| Condenser        | Type               |            | Shell & C opper Tube |              |              |              |              |
|                  | water flow (m3/h)  |            | 87                   | 110          | 126          | 143          | 165          |
|                  | Cooling Pipe Dia . |            | DN125                | DN125        | DN150        | DN150        | DN150        |
| connect          | Gas in (mm)        |            | 2*φ76                | 2*φ76        | 2*φ89        | 2*φ89        | 2*φ108       |
|                  | Liquid dia (mm)    |            | φ42                  | φ54          | φ54          | φ54          | φ67          |
| Overall sizes    | L (mm)             |            | 3000                 | 3400         | 3400         | 3400         | 3600         |
|                  | W (mm)             |            | 1960                 | 1960         | 1960         | 1960         | 1960         |
|                  | H (mm)             |            | 2000                 | 2000         | 2100         | 2100         | 2100         |

Condensing temp 40°C

## 4.2 Air cooled

### 4.2.1 R22 Products

| Model            |                   |            | BLG F-50M  | BLG F-60M  | BLG F-70M  | BLG F-80M   | BLG F-90M  | BLG F-100M  |
|------------------|-------------------|------------|------------|------------|------------|-------------|------------|-------------|
| Temperature(°C)  |                   |            | -5°C~5°C   |            |            |             |            |             |
| Power            |                   |            | 380V/50HZ  |            |            |             |            |             |
| Compressor model |                   |            | CSH6553-50 | CSH6563-60 | CSH7553-70 | CS H7563-80 | CSH7573-90 | CSH7583-100 |
| Cap. & input     | Te<br>0°C         | Cap (KW)   | 98.0       | 123.0      | 143.3      | 166.1       | 201.0      | 221.0       |
|                  |                   | input (KW) | 32.3       | 40.1       | 48.6       | 54.7        | 63.1       | 72.3        |
|                  | Te<br>-5°C        | Cap (KW)   | 80.7       | 101.3      | 118.2      | 137.1       | 167.1      | 182.6       |
|                  |                   | input (KW) | 30.8       | 38.3       | 46.9       | 53.0        | 61.2       | 70.4        |
|                  | Te<br>-10°C       | Cap (KW)   | 65.6       | 82.3       | 96.2       | 111.7       | 137.0      | 149.3       |
|                  |                   | input (KW) | 29.4       | 36.5       | 45.5       | 51.6        | 59.6       | 68.6        |
| connect          | Gas in (mm)       |            | φ54        | φ54        | φ76        | φ76         | φ76        | φ76         |
|                  | Liquid dia (mm)   |            | φ28        | φ28        | φ35        | φ35         | φ35        | φ35         |
|                  | Gas out dia. (mm) |            | φ42        | φ42        | φ54        | φ54         | φ54        | φ54         |
|                  | Liduid inlet (mm) |            | φ35        | φ35        | φ42        | φ42         | φ42        | φ42         |
| Overall sizes    | L (mm)            |            | 1900       | 1900       | 2200       | 2200        | 2550       | 2550        |
|                  | W (mm)            |            | 900        | 900        | 900        | 900         | 900        | 900         |
|                  | H (mm)            |            | 1150       | 1150       | 1200       | 1200        | 1200       | 1200        |

Condensing temp 45°C

| Model             |                   |            | BLG F2-100M | BLG F2-120M | BLG F2-140M | BLG F2-160M | BLG F2-180M | BLG F2-200M |
|-------------------|-------------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Temperature(°C)   |                   |            | -5°C~5°C    |             |             |             |             |             |
| Power             |                   |            | 380V/50HZ   |             |             |             |             |             |
| Compress or model |                   |            | CSH6553-50  | CSH6563-60  | CSH7553-70  | CSH7563-80  | CSH7573-90  | CSH7583-100 |
| Cap. & input      | Te<br>0°C         | Cap (KW)   | 196.0       | 246.0       | 286.6       | 332.2       | 402.0       | 442.0       |
|                   |                   | Input (KW) | 64.6        | 80.2        | 97.2        | 109.4       | 126.2       | 144.6       |
|                   | Te<br>-5°C        | Cap (KW)   | 161.4       | 202.6       | 236.4       | 274.2       | 334.2       | 365.2       |
|                   |                   | Input (KW) | 61.6        | 76.6        | 93.8        | 106.0       | 122.4       | 140.8       |
|                   | Te<br>-10°C       | Cap (KW)   | 131.2       | 164.6       | 192.4       | 223.4       | 274.0       | 298.6       |
|                   |                   | Input (KW) | 58.8        | 73.0        | 91.0        | 103.2       | 119.2       | 137.2       |
| connect           | Gas in (mm)       |            | φ89         | φ89         | φ108        | φ108        | φ108        | φ108        |
|                   | Liquid dia (mm)   |            | φ35         | φ42         | φ42         | φ42         | φ54         | φ54         |
|                   | Gas out dia. (mm) |            | φ67         | φ67         | φ76         | φ76         | φ76         | φ76         |
|                   | Liduid inlet (mm) |            | φ42         | φ54         | φ54         | φ54         | φ54         | φ54         |
| Overall sizes     | L (mm)            |            | 2400        | 2400        | 2900        | 2900        | 2900        | 2900        |
|                   | W (mm)            |            | 1300        | 1300        | 1300        | 1300        | 1300        | 1300        |
|                   | H (mm)            |            | 1600        | 1600        | 1700        | 1700        | 1700        | 1700        |

Condensing temp 45°C

| Model            |                   |            | BLG F3-150M | BLG F3-180M | BLG F3-210M | BLG F3-240M | BLG F3-270M | BLG F3-300M |
|------------------|-------------------|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Temperature(°C)  |                   |            | -5°C~5°C    |             |             |             |             |             |
| Power            |                   |            | 380V/50HZ   |             |             |             |             |             |
| Compressor model |                   |            | CSH6553-50  | CSH6563-60  | CSH7553-70  | CSH7563-80  | CSH7573-90  | CSH7583-100 |
| Cap. & input     | Te<br>0°C         | Cap (KW)   | 294.0       | 369.0       | 429.9       | 498.3       | 603.0       | 663.0       |
|                  |                   | Input (KW) | 96.9        | 120.3       | 145.8       | 164.1       | 189.3       | 216.9       |
|                  | Te-5<br>°C        | Cap (KW)   | 242.1       | 303.9       | 354.6       | 411.3       | 501.3       | 547.8       |
|                  |                   | Input (KW) | 92.4        | 114.9       | 140.7       | 159.0       | 183.6       | 211.2       |
|                  | Te-10<br>°C       | Cap (KW)   | 196.8       | 246.9       | 288.6       | 335.1       | 411.0       | 447.9       |
|                  |                   | Input (KW) | 88.2        | 109.5       | 136.5       | 154.8       | 178.8       | 205.8       |
| connect          | Gas in (mm)       |            | 2*φ76       | 2*φ76       | 2*φ89       | 2*φ89       | 2*φ108      | 2*φ108      |
|                  | Liquid dia (mm)   |            | φ42         | φ54         | φ54         | φ54         | φ67         | φ67         |
|                  | Gas out dia. (mm) |            | φ76         | φ76         | φ89         | φ89         | φ89         | φ89         |
|                  | Liquid inlet (mm) |            | φ54         | φ54         | φ54         | φ54         | φ67         | φ67         |
| Overall sizes    | L (mm)            |            | 3000        | 3000        | 3000        | 3000        | 3000        | 3000        |
|                  | W (mm)            |            | 1960        | 1960        | 1960        | 1960        | 1960        | 1960        |
|                  | H (mm)            |            | 2000        | 2000        | 2100        | 2100        | 2100        | 2100        |

Condensing temp 45°C

#### 4.2.2 R404A Products

| Model            |                   |            | BLG F-50MY  | BLG F-60MY  | BLG F-70MY  | BLG F-80MY  | BLG F-90MY  |
|------------------|-------------------|------------|-------------|-------------|-------------|-------------|-------------|
| Temperature(°C)  |                   |            | -5°C~5°C    |             |             |             |             |
| Power            |                   |            | 380V/50HZ   |             |             |             |             |
| Compressor model |                   |            | CSH6553-50Y | CSH6563-60Y | CSH7553-70Y | CSH7563-80Y | CSH7573-90Y |
| Cap. & input     | Te0°C             | Cap (KW)   | 99.1        | 124.5       | 143.8       | 162.7       | 188.9       |
|                  |                   | Input (KW) | 38.2        | 47.7        | 53.5        | 60.2        | 69.4        |
|                  | Te<br>-5°C        | Cap (KW)   | 80.3        | 101.0       | 116.3       | 131.7       | 154.0       |
|                  |                   | Input (KW) | 37.3        | 46.5        | 52.3        | 58.2        | 67.7        |
|                  | Te<br>-10°C       | Cap (KW)   | 64.3        | 80.9        | 93.0        | 105.5       | 124.3       |
|                  |                   | Input (KW) | 36.5        | 45.4        | 51.3        | 56.6        | 66.2        |
| connect          | Gas in (mm)       |            | φ54         | φ54         | φ76         | φ76         | φ76         |
|                  | Liquid dia (mm)   |            | φ28         | φ28         | φ35         | φ35         | φ35         |
|                  | Gas out dia. (mm) |            | φ42         | φ42         | φ54         | φ54         | φ54         |
|                  | Liquid inlet (mm) |            | φ35         | φ35         | φ42         | φ42         | φ42         |
| Overall sizes    | L (mm)            |            | 1900        | 1900        | 2200        | 2200        | 2550        |
|                  | W (mm)            |            | 900         | 900         | 900         | 900         | 900         |
|                  | H (mm)            |            | 1150        | 1150        | 1200        | 1200        | 1200        |

Condensing temp 4 ~ 5°C



| Model            |                   |            | BLG F2-100MY | BLG F2-120MY | BLG F2-140MY | BLG F2-160MY | BLG F2-180MY |
|------------------|-------------------|------------|--------------|--------------|--------------|--------------|--------------|
| Temperature(°C)  |                   |            | -5°C~5°C     |              |              |              |              |
| Power            |                   |            | 380V/50HZ    |              |              |              |              |
| Compressor model |                   |            | CSH6553-50Y  | CSH6563-60Y  | CSH7553-70Y  | CSH7563-80Y  | CSH7573-90Y  |
| Cap. & input     | Te<br>0°C         | Cap (KW)   | 198.2        | 249.0        | 287.6        | 325.4        | 377.8        |
|                  |                   | Input (KW) | 76.4         | 95.4         | 107.0        | 120.4        | 138.8        |
|                  | Te<br>-5°C        | Cap (KW)   | 160.6        | 202.0        | 232.6        | 263.4        | 308.0        |
|                  |                   | Input (KW) | 74.6         | 93.0         | 104.6        | 116.4        | 135.4        |
|                  | Te<br>-10°C       | Cap (KW)   | 128.6        | 161.8        | 186.0        | 211.0        | 248.6        |
|                  |                   | Input (KW) | 73.0         | 90.8         | 102.6        | 113.2        | 132.4        |
| connect          | Gas in (mm)       |            | φ89          | φ89          | φ108         | φ108         | φ108         |
|                  | Liquid dia (mm)   |            | φ35          | φ42          | φ42          | φ42          | φ54          |
|                  | Gas out dia. (mm) |            | φ67          | φ67          | φ76          | φ76          | φ76          |
|                  | Liduid inlet (mm) |            | φ42          | φ54          | φ54          | φ54          | φ54          |
| Overall sizes    | L (mm)            |            | 2400         | 2400         | 2900         | 2900         | 2900         |
|                  | W (mm)            |            | 1300         | 1300         | 1300         | 1300         | 1300         |
|                  | H (mm)            |            | 1600         | 1600         | 1700         | 1700         | 1700         |

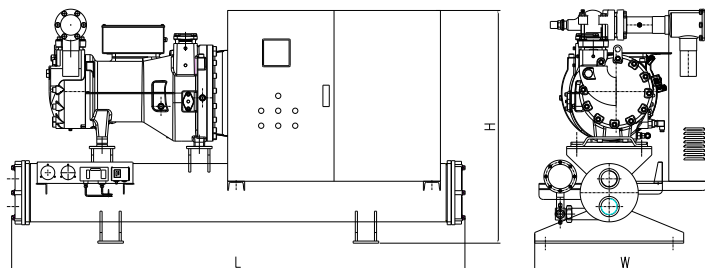
Condensing temp 45°C

| Model            |                   |            | BLG F3-150MY | BLG F3-180MY | BLG F3-210MY | BLG F3-240MY | BLG F3-270MY |
|------------------|-------------------|------------|--------------|--------------|--------------|--------------|--------------|
| Temperature(°C)  |                   |            | -5°C~5°C     |              |              |              |              |
| Power            |                   |            | 380V/50HZ    |              |              |              |              |
| Compressor model |                   |            | CSH6553-50Y  | CSH6563-60Y  | CSH7553-70Y  | CSH7563-80Y  | CSH7573-90Y  |
| Cap. & input     | Te<br>0°C         | Cap (KW)   | 297.3        | 373.5        | 431.4        | 488.1        | 566.7        |
|                  |                   | Input (KW) | 114.6        | 143.1        | 160.5        | 180.6        | 208.2        |
|                  | Te<br>-5°C        | Cap (KW)   | 240.9        | 303.0        | 348.9        | 395.1        | 462.0        |
|                  |                   | Input (KW) | 111.9        | 139.5        | 156.9        | 174.6        | 203.1        |
|                  | Te<br>-10°C       | Cap (KW)   | 192.9        | 242.7        | 279.0        | 316.5        | 372.9        |
|                  |                   | Input (KW) | 109.5        | 136.2        | 153.9        | 169.8        | 198.6        |
| connect          | Gas in (mm)       |            | 2*φ76        | 2*φ76        | 2*φ89        | 2*φ89        | 2*φ108       |
|                  | Liquid dia (mm)   |            | φ42          | φ54          | φ54          | φ54          | φ67          |
|                  | Gas out dia (mm)  |            | φ76          | φ76          | φ89          | φ89          | φ89          |
|                  | Liduid inlet (mm) |            | φ54          | φ54          | φ54          | φ54          | φ67          |
| Overall sizes    | L (mm)            |            | 3000         | 3000         | 3000         | 3000         | 3000         |
|                  | W (mm)            |            | 1960         | 1960         | 1960         | 1960         | 1960         |
|                  | H (mm)            |            | 2000         | 2000         | 2100         | 2100         | 2100         |

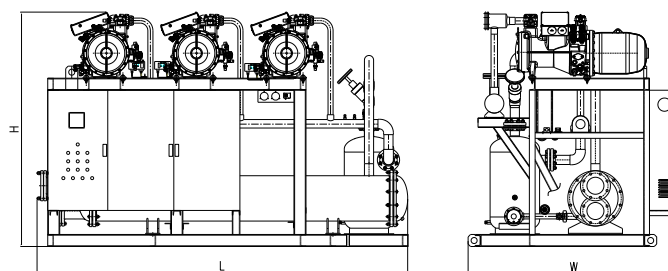
Condensing temp 45°C

## 5. Diagrams for Overall sizes

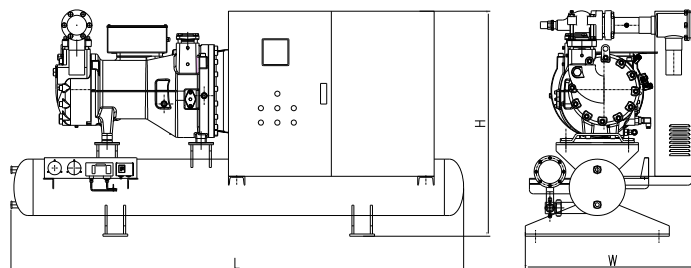
### 5.1 Water Cooled Single Compressor Rack



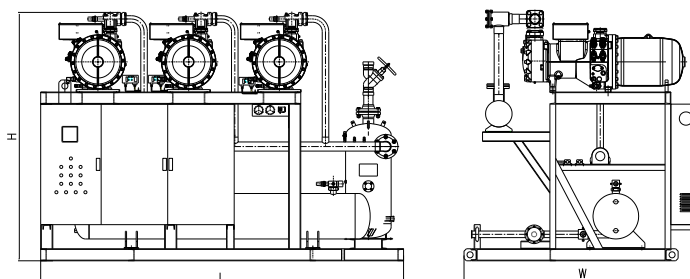
### 5.2 Water Cooled Compressor Rack



### 5.3 Air Cooled Single Compressor Rack



### 5.4 Air Cooled Compressor Rack



## HLG-H Series Mid Temperature Screw Compressor racks

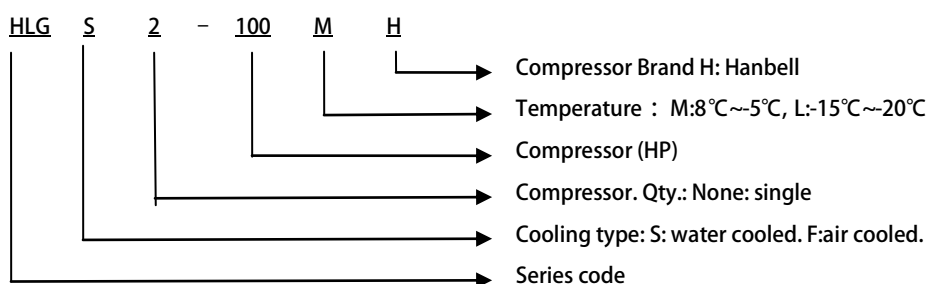
### 1. Product description

This HLG-H series products are applicable to the large size  $-5^{\circ}\text{C}\sim 8^{\circ}\text{C}$  and  $-15^{\circ}\text{C}\sim 20^{\circ}\text{C}$  refrigeration system, as the large size fresh keeping cold rooms, ice making, chiller etc.

This Series features Hanbell asymmetrical rotor screw compressors, multi-phase capacity regulation,

All this series products have a complete set protection devices for compressor motor coil, over discharging temperature, low oil level, low oil pressure difference, high/low pressure etc.

### 2. Model code



### 3. Main components

HLGS(F)  $\times$  M single unit :

●Screw Compressor. ●Condenser(only for Water cooled)●Receiver(only for Air cooled)●Filter vat ●Sight glasses ● Hydrojet system ●Feed pipe ball valve● Oil differential pressure protection● High & Low pressure protector ●Pressure gauge ●High pressure controller(control cooling tower or condenser fan)●Low pressure sensor(optional)●Unit control box (Nonshared control unit for screw compressor.)

HLGS(F)  $\times$  L single unit:

●Screw Compressor. ●Twice oil separate ●Oil separator outlet ball valve ●Oil return sight glasses ●Condenser(only for Water cooled)●Receiver(only for Air cooled)●Filter vat ●Sight glasses ●Hydrojet system ●Economizer system ●Oil differential pressure protection ●High-low pressure protector. ●Pressure gauge ●High pressure controller(control cooling tower or condenser fan)●Low pressure sensor(optional)●Unit control box (Nonshared control unit for screw Compressor.)

HLGS(F)  $\times$  M Multi compressor rack :

●Screw Compressor. ●Oil separator ●Oil separator outlet valve ●Return oil system assembly ●Condenser(only for Water-cooling unit) ●Receiver ●Filter vat ●Sight glasses ●Hydrojet system ●Suction Filter ●High pressure protector ●Pressure gauge ●High pressure controller (control cooling tower or condenser fan)●Low pressure sensor(optional)●Unit control box(PLC+Touch panel)

HLGS(F)  $\times$  L Multi compressor rack

●Screw Compressor ●Oil separator ●Oil separator outlet valve ●Return oil system assembly ●Oil cooler(only for Air-cooling unit)●Condenser(only for Water cooled)●Receiver ●Filter vat ●Sight glasses ●Hydrojet system ●Suction Filter ●Economizer system ●Highlow pressure protector ●Pressure gauge ●High pressure controller (control condensing fan)●Low pressure sensor(optional)●Unit control box (PLC+Touch panel)

Air cooled rack condenser is optional.

## 4. Specifications:

### 4.1 Water cooled compressor racks

| Model                        |                                     | HLGS-30MH           | HLGS-40MH | HLGS-50MH | HLGS-60MH    |
|------------------------------|-------------------------------------|---------------------|-----------|-----------|--------------|
| Evaporating Temperature( °C) |                                     | -5~8                |           |           |              |
| Refrigerant                  |                                     | R22                 |           |           |              |
| Power supply                 |                                     | 380V/50HZ           |           |           |              |
| Comp.                        | Type                                | Semi-Hermetic Screw |           |           |              |
|                              | Comp. Model                         | RC2 -100B           | RC2 -140B | RC2 -180B | RC2 -230B    |
|                              | Qty.                                | 66%-100%            |           |           | 50%-75%-100% |
| Condenser                    | Type                                | Shell & Copper Tube |           |           |              |
|                              | Rated water flow(m <sup>3</sup> /h) | 18                  | 24        | 31        | 42           |
|                              | Connect spec.                       | 2-1/2"              | 2-1/2"    | 3"        | 3"           |
| Cap & Watt                   | Te<br>0°C                           | Cap. (KW)           | 78.5      | 107       | 140.3        |
|                              |                                     | Input (KW)          | 22.9      | 30.2      | 37.8         |
|                              | Te<br>-5°C                          | Cap. (KW)           | 64.9      | 88.5      | 116.1        |
|                              |                                     | Input (KW)          | 21.9      | 28.9      | 36.2         |
|                              | Te<br>-10°C                         | Cap. (KW)           | 55.3      | 72.7      | 95.3         |
|                              |                                     | Input (KW)          | 21.0      | 27.7      | 34.7         |
| Conn                         | Liquid dia. (mm)                    |                     | φ 54      | φ 54      | φ 66         |
|                              | Gas out dia. (mm)                   |                     | φ 28      | φ 28      | φ 35         |
| Overall sizes                | A(mm)                               |                     | 1700      | 1700      | 2150         |
|                              | B(mm)                               |                     | 670       | 670       | 680          |
|                              | C(mm)                               |                     | 1100      | 1100      | 1100         |
| overall size a×b (mm)        |                                     | 1000×390            | 1000×390  | 1200×390  | 1200×450     |

| Model                        |                                     | HLGS-70MH           | HLGS-80MH | HLGS-90MH | HLGS-100MH |
|------------------------------|-------------------------------------|---------------------|-----------|-----------|------------|
| Evaporating Temperature( °C) |                                     | -5~8                |           |           |            |
| Refrigerant                  |                                     | R22                 |           |           |            |
| Power supply                 |                                     | 380V/50HZ           |           |           |            |
| Comp.                        | Type                                | Semi-Hermetic Screw |           |           |            |
|                              | Comp. Model                         | RC2 -260B           | RC2 -310B | RC2 -340B | RC2 -370B  |
|                              | Qty.                                | 50%-75%-100%        |           |           |            |
| Condenser                    | Type                                | Shell & Copper Tube |           |           |            |
|                              | Rated water flow(m <sup>3</sup> /h) | 46                  | 56        | 62        | 67         |
|                              | Connect spec.                       | 4"                  | 4"        | 5"        | 5"         |
| Cap & Watt                   | Te<br>0°C                           | Cap. (KW)           | 204.5     | 254.5     | 278.5      |
|                              |                                     | Input (KW)          | 55.1      | 65.1      | 71.8       |
|                              | Te<br>-5°C                          | Cap. (KW)           | 169.1     | 210.6     | 230.4      |
|                              |                                     | Input (KW)          | 52.7      | 62.4      | 69.0       |
|                              | Te<br>-10°C                         | Cap. (KW)           | 138.9     | 172.9     | 189.2      |
|                              |                                     | Input (KW)          | 50.4      | 59.7      | 66.8       |
| Connect                      | Liquid dia.. (mm)                   |                     | φ 76      | φ 76      | φ 108      |
|                              | Gas out dia.. (mm)                  |                     | φ 35      | φ 42      | φ 42       |
| Overall sizes                | A(mm)                               |                     | 2300      | 2600      | 2600       |
|                              | B(mm)                               |                     | 770       | 850       | 850        |
|                              | C(mm)                               |                     | 1250      | 1300      | 1300       |
| overall size a×b(mm)         |                                     | 1200×450            | 1500×500  | 1500×500  | 1500×500   |

Remark : Cooling capacity and input power under condensing temp. at 40 °C

#### 4.2 Water cooled M/H temp racks

| Model                        |                    | HLGS2-60MH          | HLGS2-80MH     | HLGS2-100MH    | HLGS2-120MH      |
|------------------------------|--------------------|---------------------|----------------|----------------|------------------|
| Evaporating Temperature( °C) |                    | -5°C~8°C            |                |                |                  |
| Refrigerant                  |                    | R22                 |                |                |                  |
| Power supply                 |                    | 380V/50HZ           |                |                |                  |
| Comp.                        | Type               | Semi-Hermetic Screw |                |                |                  |
|                              | Comp. Model        | RC2 -100B           | RC2 -140B      | RC2 -180B      | RC2 -230B        |
|                              | Qty.               | 2                   | 2              | 2              | 2                |
| Energy adjustment            |                    | 33%-50%-66%-100%    |                |                | 25%-50%-75%-100% |
| Condenser                    | Type               | Shell & Copper Tube |                |                |                  |
|                              | Water flow (m³/h)  | 36                  | 48             | 63             | 70               |
|                              | Connector Size     | 3 "                 | 4 "            | 5 "            | 5 "              |
| Cap. & Watt.                 | Te 0°C             | Cap. (KW)           | 157            | 214            | 280.6            |
|                              |                    | Input (KW)          | 45.8           | 60.4           | 75.6             |
|                              | Te -5°C            | Cap. (KW)           | 129.8          | 177            | 232.2            |
|                              |                    | Input (KW)          | 43.8           | 59.4           | 72.4             |
|                              | Te -10°C           | Cap. (KW)           | 106.6          | 145.4          | 190.6            |
|                              |                    | Input (KW)          | 42.0           | 55.4           | 69.4             |
| Connector                    | Suction (mm)       |                     | φ 76           | φ 89           | φ 108            |
|                              | Gas out dia.. (mm) |                     | φ 35           | φ 35           | φ 42             |
| Overall Size A×B×C(mm)       |                    | 2300×1550×1470      | 2300×1550×1470 | 2650×1750×1470 | 3090×1850×1860   |

| Model                        |                    | HLGS2-140MH         | HLGS2-160MH    | HLGS2-180MH    | HLGS2-200MH    |
|------------------------------|--------------------|---------------------|----------------|----------------|----------------|
| Evaporating Temperature( °C) |                    | -5°C~8°C            |                |                |                |
| Refrigerant                  |                    | R22                 |                |                |                |
| Power supply                 |                    | 380V/50HZ           |                |                |                |
| Comp.                        | Type               | Semi-Hermetic Screw |                |                |                |
|                              | Comp. Model        | RC2 -260B           | RC2 -310B      | RC2 -340B      | RC2 -370B      |
|                              | Qty.               | 2                   | 2              | 2              | 2              |
| Energy adjustment            |                    | 25%-50%-75%-100%    |                |                |                |
| Condenser                    | Type               | Shell & Copper Tube |                |                |                |
|                              | water flow (m³/h)  | 93                  | 113            | 125            | 136            |
|                              | Connector Size     | 6 "                 | 6 "            | 5 "            | 6 "            |
| Cap. & Watt.                 | Te 0°C             | Cap. (KW)           | 409            | 509            | 557            |
|                              |                    | Input (KW)          | 110.0          | 130.2          | 143.4          |
|                              | Te -5°C            | Cap. (KW)           | 338.2          | 421.2          | 460.8          |
|                              |                    | Input (KW)          | 105.4          | 124.8          | 137.4          |
|                              | Te -10°C           | Cap. (KW)           | 277.8          | 345.8          | 378.4          |
|                              |                    | Input (KW)          | 100.8          | 119.4          | 131.6          |
| Connector                    | Suction (mm)       |                     | φ 108          | φ 108          | φ 108          |
|                              | Gas out dia.. (mm) |                     | φ 54           | φ 54           | φ 54           |
| Overall Size A×B×C(mm)       |                    | 3200×1850×1860      | 3370×2050×1860 | 3370×2050×1860 | 3470×2100×2100 |

| Model                        |                                | HLGS3-90MH          | HLGS3-120MH    | HLGS3-150MH    | HLGS3-180MH              |
|------------------------------|--------------------------------|---------------------|----------------|----------------|--------------------------|
| Evaporating Temperature( °C) |                                | -5°C~8°C            |                |                |                          |
| Refrigerant                  |                                | R22                 |                |                |                          |
| Power supply                 |                                | 380V/50HZ           |                |                |                          |
| Comp                         | Type                           | Semi-Hermetic Screw |                |                |                          |
|                              | Comp. Model                    | RC2 -100B           | RC2 -140B      | RC2 -180B      | RC2 -230B                |
|                              | Qty.                           | 3                   | 3              | 3              | 3                        |
| Energy adjustment            |                                | 33%-66%-100%        |                |                | 16%-33%-50%-66%-83%-100% |
| Condenser                    | Type                           | Shell & Copper Tube |                |                |                          |
|                              | Water flow (m <sup>3</sup> /h) | 55                  | 75             | 95             | 130                      |
|                              | Connector Size                 | 4"                  | 5"             | 5"             | 6"                       |
| Cap. & Watt.                 | Te 0°C                         | Cap. (KW)           | 235.5          | 321            | 420.9                    |
|                              |                                | Input (KW)          | 68.7           | 90.6           | 113.4                    |
|                              | Te -5°C                        | Cap. (KW)           | 194.7          | 265.5          | 348.3                    |
|                              |                                | Input (KW)          | 65.7           | 86.7           | 108.6                    |
|                              | Te -10°C                       | Cap. (KW)           | 159.9          | 218.1          | 285.9                    |
|                              |                                | Input (KW)          | 63.0           | 83.1           | 104.1                    |
| Connector                    | Suction (mm)                   |                     | 2×φ76          | 2×φ76          | 2×φ76                    |
|                              | Gas out dia.. (mm)             |                     | φ35            | φ42            | φ54                      |
| Overall Size A×B×C(mm)       |                                | 2800×1750×1470      | 3000×1750×1780 | 3200×1750×1790 | 3700×2100×1860           |

| Model                        |                                | HLGS3-210MH              | HLGS3-240MH    | HLGS3-270MH    | HLGS3-300MH    |
|------------------------------|--------------------------------|--------------------------|----------------|----------------|----------------|
| Evaporating Temperature( °C) |                                | -5°C~8°C                 |                |                |                |
| Refrigerant                  |                                | R22                      |                |                |                |
| Power supply                 |                                | 380V/50HZ                |                |                |                |
| Comp.                        | Type                           | Semi-Hermetic Screw      |                |                |                |
|                              | Comp . Model                   | RC2 -260B                | RC2 -310B      | RC2 -340B      | RC2 -370B      |
|                              | Qty.                           | 3                        | 3              | 3              | 3              |
| Energy adjustment            |                                | 16%-33%-50%-66%-83%-100% |                |                |                |
| Condenser                    | Type                           | Shell & Copper Tube      |                |                |                |
|                              | Water flow (m <sup>3</sup> /h) | 140                      | 170            | 185            | 200            |
|                              | Connector Size                 | 6"                       | 6"             | 6"             | 6"             |
| Cap. & Input                 | Te 0°C                         | Cap. (KW)                | 613.5          | 763.5          | 835.5          |
|                              |                                | Input (KW)               | 165.0          | 195.3          | 215.4          |
|                              | Te -5°C                        | Cap. (KW)                | 507.3          | 631.8          | 691.2          |
|                              |                                | Input (KW)               | 158.1          | 187.2          | 207            |
|                              | Te -10°C                       | Cap. (KW)                | 416.7          | 518.7          | 567.6          |
|                              |                                | Input (KW)               | 151.2          | 179.1          | 200.4          |
| Connector                    | Suction (mm)                   |                          | 2×φ108         | 2×φ108         | 2×φ108         |
|                              | Gas out dia. (mm)              |                          | φ54            | φ66            | φ66            |
| Overall Size A×B×C(mm)       |                                | 3930×2100×2100           | 3930×2100×2100 | 3930×2200×2100 | 3930×2200×2100 |

Remark : Cooling capacity and input power under condensing temp. at 40 °C



#### 4.3 Water cooled L/M temp racks with single compressor

| Model                        |                                | HLGS-30LH           | HLGS-40LH | HLGS-50LH | HLGS-60LH    |
|------------------------------|--------------------------------|---------------------|-----------|-----------|--------------|
| Evaporating Temperature( °C) |                                | -15~-20             |           |           |              |
| Refrigerant                  |                                | R22                 |           |           |              |
| Power supply                 |                                | 380V/50HZ           |           |           |              |
| Comp.                        | Type                           | Semi-Hermetic Screw |           |           |              |
|                              | Comp. Model                    | RC2 -100B           | RC2 -140B | RC2 -180B | RC2 -230B    |
|                              | Qty.                           | 66%-100%            |           |           | 50%-75%-100% |
| Condenser                    | Type                           | Shell & Copper Tube |           |           |              |
|                              | Water flow (m <sup>3</sup> /h) | 11                  | 15        | 18        | 25           |
|                              | Connector Size                 | 2-1/2 "             | 2-1/2 "   | 3 "       | 3 "          |
| Cap & Watt                   | Te -20°C                       | Cap. (KW)           | 43.3      | 59.1      | 77.1         |
|                              |                                | Input (KW)          | 21.5      | 28.3      | 35.5         |
|                              | Te -25°C                       | Cap. (KW)           | 35.4      | 48.3      | 63.3         |
|                              |                                | Input (KW)          | 20.8      | 27.4      | 34.4         |
|                              | Te -30°C                       | Cap. (KW)           | 28.6      | 39        | 51.2         |
|                              |                                | Input (KW)          | 20.1      | 26.4      | 33.2         |
| Connect                      | Liquid dia.. (mm)              | φ 54                | φ 54      | φ 66      | φ 76         |
|                              | Gas out dia.. (mm)             | φ 22                | φ 22      | φ 28      | φ 28         |
| Overall sizes                | A(mm)                          | 1700                | 1700      | 2150      | 2300         |
|                              | B(mm)                          | 670                 | 670       | 680       | 770          |
|                              | C(mm)                          | 1140                | 1140      | 1150      | 1300         |
| overall size a×b (mm)        |                                | 1000×800            | 1000×800  | 1200×1000 | 1200×1000    |

| Model                        |                                | HLGS-70LH           | HLGS-80LH | HLGS-90LH | HLGS-100LH |
|------------------------------|--------------------------------|---------------------|-----------|-----------|------------|
| Evaporating Temperature( °C) |                                | -15~-20             |           |           |            |
| Refrigerant                  |                                | R22                 |           |           |            |
| Power supply                 |                                | 380V/50HZ           |           |           |            |
| Comp.                        | Type                           | Semi-Hermetic Screw |           |           |            |
|                              | Comp. Model                    | RC2 -260B           | RC2 -310B | RC2 -340B | RC2 -370B  |
|                              | Qty.                           | 50%-75%-100%        |           |           |            |
| Condenser                    | Type                           | Shell & Copper Tube |           |           |            |
|                              | Water flow (m <sup>3</sup> /h) | 27                  | 34        | 37        | 40         |
|                              | Connector Size                 | 3 "                 | 3 "       | 4 "       | 4 "        |
| Cap & Watt                   | Te -20°C                       | Cap. (KW)           | 112.9     | 140.6     | 153.8      |
|                              |                                | Input (KW)          | 51.6      | 61.1      | 67.2       |
|                              | Te -25°C                       | Cap. (KW)           | 92.3      | 114.9     | 125.7      |
|                              |                                | Input (KW)          | 50.0      | 59.3      | 65.2       |
|                              | Te -30°C                       | Cap. (KW)           | 74.6      | 92.9      | 101.6      |
|                              |                                | Input (KW)          | 48.2      | 57.1      | 62.9       |
| Connect                      | Liquid dia.. (mm)              | φ 76                | φ 76      | φ 108     | φ 108      |
|                              | Gas out dia.. (mm)             | φ 28                | φ 35      | φ 35      | φ 35       |
| Overall sizes                | A(mm)                          | 2300                | 2600      | 2600      | 2600       |
|                              | B(mm)                          | 770                 | 850       | 850       | 850        |
|                              | C(mm)                          | 1300                | 1350      | 1350      | 1300       |
| overall size a×b(mm)         |                                | 1200×1000           | 1500×1300 | 1500×1300 | 1500×1300  |

Remark: Cooling capacity and input power under condensing temp. at 40 °C.

#### 4.4 Water cooled L/M temp. racks

| Model                        |                    |            | HLGS2-60LH          | HLGS2-80LH     | HLGS2-100LH    | HLGS2-120LH      |
|------------------------------|--------------------|------------|---------------------|----------------|----------------|------------------|
| Evaporating Temperature( °C) |                    |            | -15℃~-20℃           |                |                |                  |
| Refrigerant                  |                    |            | R22                 |                |                |                  |
| Power supply                 |                    |            | 380V/50HZ           |                |                |                  |
| Compressor                   | Type               |            | Semi-Hermetic Screw |                |                |                  |
|                              | Comp. Model        |            | RC2 -100B           | RC2 -140B      | RC2 -180B      | RC2 -230B        |
|                              | Qty.               |            | 2                   | 2              | 2              | 2                |
| Energy adjustment            |                    |            | 33%-50%-66%-100%    |                |                | 25%-50%-75%-100% |
| Condenser                    | Type               |            | Shell & Copper Tube |                |                |                  |
|                              | Water flow (m ³/h) |            | 22                  | 30             | 38             | 50               |
|                              | Connector Size     |            | 3 "                 | 3 "            | 4 "            | 5 "              |
| Cap. & Watt.                 | Te<br>-20℃         | Cap. (KW)  | 86.6                | 118.2          | 155            | 205.8            |
|                              |                    | Input (KW) | 43.0                | 56.6           | 71.0           | 94.6             |
|                              | Te<br>-25℃         | Cap. (KW)  | 70.8                | 96.6           | 126.6          | 168.2            |
|                              |                    | Input (KW) | 41.6                | 54.8           | 68.8           | 91.8             |
|                              | Te<br>-30℃         | Cap. (KW)  | 57.2                | 78             | 102.4          | 135.8            |
|                              |                    | Input (KW) | 40.2                | 52.8           | 66.4           | 88.6             |
| Connector                    | Suction (mm)       |            | φ 76                | φ 89           | φ 108          | φ 108            |
|                              | Gas out dia.. (mm) |            | φ 35                | φ 35           | φ 42           | φ 42             |
| Overall Size A×B×C(mm)       |                    |            | 2300×1750×1470      | 2300×1750×1470 | 2650×1950×1470 | 3090×1950×1860   |

| Model                             |                                |            | HLGS2-140LH         | HLGS2-160LH    | HLGS2-180LH    | HLGS2-200LH    |
|-----------------------------------|--------------------------------|------------|---------------------|----------------|----------------|----------------|
| Evaporating.<br>Tempe rature( °C) |                                |            | -15℃~-20℃           |                |                |                |
| Refrigerant                       |                                |            | R22                 |                |                |                |
| Power supply                      |                                |            | 380V/50HZ           |                |                |                |
| Comp.                             | Type                           |            | Semi-Hermetic Screw |                |                |                |
|                                   | Comp. Model                    |            | RC2 -260B           | RC2 -310B      | RC2 -340B      | RC2 -370B      |
|                                   | Qty.                           |            | 2                   | 2              | 2              | 2              |
| Energy adjustment                 |                                |            | 25%-50%-75%-100%    |                |                |                |
| Condenser                         | Type                           |            | Shell & Copper Tube |                |                |                |
|                                   | Water flow (m <sup>3</sup> /h) |            | 55                  | 68             | 75             | 80             |
|                                   | Connector Size                 |            | 5 "                 | 5 "            | 5 "            | 5 "            |
| Cap. & Watt.                      | Te<br>-20℃                     | Cap. (KW)  | 225.8               | 281.2          | 307.6          | 333            |
|                                   |                                | Input (KW) | 103.2               | 122.2          | 134.4          | 146.8          |
|                                   | Te<br>-25℃                     | Cap. (KW)  | 184.6               | 229.8          | 251.4          | 272.2          |
|                                   |                                | Input (KW) | 100.0               | 118.6          | 130.4          | 142.4          |
|                                   | Te<br>-30℃                     | Cap. (KW)  | 149.2               | 185.8          | 203.2          | 220            |
|                                   |                                | Input (KW) | 96.4                | 114.2          | 125.8          | 137.2          |
| Connector                         | Suction (mm)                   |            | φ 108               | φ 108          | φ 108          | φ 133          |
|                                   | Gas out dia.. (mm)             |            | φ 54                | φ 54           | φ 54           | φ 54           |
| Overall Size A×B×C(mm)            |                                |            | 3290×1950×1860      | 3370×2050×1860 | 3370×2050×1860 | 3470×2100×2100 |

| Model                        |                    |            | HLGS3-90LH          | HLGS3-120LH    | HLGS3-150LH    | HLGS3-180LH              |
|------------------------------|--------------------|------------|---------------------|----------------|----------------|--------------------------|
| Evaporating Temperature( °C) |                    |            | -15℃~-20℃           |                |                |                          |
| Refrigerant                  |                    |            | R22                 |                |                |                          |
| Power supply                 |                    |            | 380V/50HZ           |                |                |                          |
| Comp.                        | Type               |            | Semi-Hermetic Screw |                |                |                          |
|                              | Comp. Model        |            | RC2 -100B           | RC2 -140B      | RC2 -180B      | RC2 -230B                |
|                              | Qty.               |            | 3                   | 3              | 3              | 3                        |
| Energy adjustment            |                    |            | 33%-66%-100%        |                |                | 16%-33%-50%-66%-83%-100% |
| Condenser                    | Type               |            | Shell & Copper Tube |                |                |                          |
|                              | Water flow （m³/h）  |            | 33                  | 45             | 57             | 76                       |
|                              | Connector Size     |            | 3 "                 | 4 "            | 5 "            | 5 "                      |
| Cap. & Watt.                 | Te<br>-20℃         | Cap. (KW)  | 129.9               | 177.3          | 232.5          | 308.7                    |
|                              |                    | Input (KW) | 64.5                | 84.9           | 106.5          | 141.9                    |
|                              | Te<br>-25℃         | Cap. (KW)  | 106.2               | 174.9          | 189.9          | 252.3                    |
|                              |                    | Input (KW) | 62.4                | 82.2           | 103.2          | 137.7                    |
|                              | Te<br>-30℃         | Cap. (KW)  | 85.8                | 117            | 153.6          | 203.7                    |
|                              |                    | Input (KW) | 60.3                | 79.2           | 99.6           | 132.9                    |
| Connector                    | Suction (mm)       |            | 2×φ76               | 2×φ76          | 2×φ76          | 2×φ108                   |
|                              | Gas out dia.. (mm) |            | φ35                 | φ42            | φ42            | φ54                      |
| Overall Size A×B×C(mm)       |                    |            | 2800×1950×1470      | 3000×1950×1780 | 3200×1950×1790 | 3700×2100×1860           |

| Model                        |                    |             | HLGS3-210LH              | HLGS3-240LH    | HLGS3-270LH    | HLGS3-300LH    |
|------------------------------|--------------------|-------------|--------------------------|----------------|----------------|----------------|
| Evaporating Temperature( °C) |                    |             | -15℃~-20℃                |                |                |                |
| Refrigerant                  |                    |             | R22                      |                |                |                |
| Power supply                 |                    |             | 380V/50HZ                |                |                |                |
| Comp.                        | Type               |             | Semi-Hermetic Screw      |                |                |                |
|                              | Comp. Model        |             | RC2 -260B                | RC2 -310B      | RC2 -340B      | RC2 -370B      |
|                              | Qty.               |             | 3                        | 3              | 3              | 3              |
| Energy adjustment            |                    |             | 16%-33%-50%-66%-83%-100% |                |                |                |
| Condenser                    | Type               |             | Shell & Copper Tube      |                |                |                |
|                              | Water flow （m³/h）  |             | 83                       | 102            | 112            | 121            |
|                              | Connector Size     |             | 5″                       | 6″             | 6″             | 6″             |
| Cap. & Watt.                 | Te<br>-20℃         | Cap. (KW)   | 338.7                    | 421.8          | 461.4          | 499.5          |
|                              |                    | Input (KW)  | 154.8                    | 183.3          | 201.6          | 220.2          |
|                              | Te<br>-25℃         | Cap. (KW)   | 276.9                    | 344.7          | 377.1          | 408.3          |
|                              |                    | Input ( KW) | 150.0                    | 177.9          | 195.6          | 213.6          |
|                              | Te<br>-30℃         | Cap. (KW)   | 223.8                    | 278.7          | 304.8          | 330            |
|                              |                    | Input (KW)  | 144.6                    | 171.3          | 188.7          | 205.8          |
| Connector                    | Suction (mm)       |             | 2×φ108                   | 2×φ108         | 2×φ108         | 2×φ108         |
|                              | Gas out dia.. (mm) |             | φ54                      | φ54            | φ54            | φ54            |
| Overall Size A×B×C(mm)       |                    |             | 3930×2100×2100           | 3930×2100×2100 | 3930×2200×2100 | 3930×2200×2100 |

Remark : Cooling capacity and input power under condensing temp. at 40 °C

#### 4.5 Water cooled M/H temp racks :

| Model                        |                    |            | HLGF-30MH           | HLGF-40MH | HLGF-50MH    | HLGF-60MH |
|------------------------------|--------------------|------------|---------------------|-----------|--------------|-----------|
| Evaporating Temperature( °C) |                    |            | -5℃~8℃              |           |              |           |
| Refrigerant                  |                    |            | R22                 |           |              |           |
| Power supply                 |                    |            | 380V/50HZ           |           |              |           |
| Comp.                        | Type               |            | Semi-Hermetic Screw |           |              |           |
|                              | Comp. Model        |            | RC2 -100B           | RC2 -140B | RC2 -180B    | RC2 -230B |
|                              | Qty.               |            | 66%-100%            |           | 50%-75%-100% |           |
| Cap &Watt                    | Te 0℃              | Cap. (KW)  | 73.3                | 99.9      | 131.1        | 174       |
|                              |                    | Input (KW) | 25.0                | 32.9      | 41.2         | 55.1      |
|                              | Te -5℃             | Cap. (KW)  | 60.4                | 82.4      | 108.1        | 143.5     |
|                              |                    | Input (KW) | 23.9                | 31.5      | 39.5         | 52.7      |
|                              | Te -10℃            | Cap. (KW)  | 49.5                | 67.5      | 88.5         | 117.5     |
|                              |                    | Input (KW) | 22.9                | 30.2      | 37.8         | 50.5      |
| Connect                      | Liquid dia.. (mm)  |            | φ 54                | φ 54      | φ 66         | φ 76      |
|                              | Gas out dia.. (mm) |            | φ 22                | φ 28      | φ 28         | φ 42      |
|                              | Discharge (mm)     |            | φ 42                | φ 42      | φ 42         | φ 54      |
|                              | Liquid in(mm)      |            | φ 26                | φ 35      | φ 35         | φ 35      |
| Overall Size                 | A(mm)              |            | 1700                | 1700      | 2150         | 2300      |
|                              | B(mm)              |            | 670                 | 670       | 680          | 770       |
|                              | C(mm)              |            | 1100                | 1100      | 1100         | 1250      |
| overall size a×b (mm)        |                    |            | 1000×390            | 1000×390  | 1200×390     | 1200×390  |

| Model                        |                    |            | HLGF-70MH           | HLGF-80MH | HLGF-90MH | HLGF-100MH |
|------------------------------|--------------------|------------|---------------------|-----------|-----------|------------|
| Evaporating Temperature( °C) |                    |            | -5℃~8℃              |           |           |            |
| Refrigerant                  |                    |            | R22                 |           |           |            |
| Power supply                 |                    |            | 380V/50HZ           |           |           |            |
| Co mp.                       | Type               |            | Semi-Hermetic Screw |           |           |            |
|                              | Comp. Model        |            | RC2 -260B           | RC2 -310B | RC2 -340B | RC2 -370B  |
|                              | Qty.               |            | 50%-75%-100%        |           |           |            |
| Cap &Watt                    | Te 0℃              | Cap. (KW)  | 190.9               | 237.7     | 260.1     | 281.6      |
|                              |                    | Input (KW) | 60.0                | 71.0      | 78.2      | 85.3       |
|                              | Te -5℃             | Cap. (KW)  | 157.5               | 196.1     | 214.6     | 232.3      |
|                              |                    | Input (KW) | 57.5                | 68.0      | 74.9      | 81.7       |
|                              | Te -10℃            | Cap. (KW)  | 129.0               | 160.6     | 171.7     | 190.2      |
|                              |                    | Input (KW) | 55.0                | 65.2      | 71.8      | 78.3       |
| Connect                      | Liquid dia.. (mm)  |            | φ 76                | φ 76      | φ 108     | φ 108      |
|                              | Gas out dia.. (mm) |            | φ 42                | φ 42      | φ 42      | φ 42       |
|                              | Discharge (mm)     |            | φ 54                | φ 54      | φ 66      | φ 66       |
|                              | Liquid in (mm)     |            | φ 35                | φ 54      | φ 54      | φ 54       |
| Overall Size                 | A(mm)              |            | 2300                | 2600      | 2600      | 2600       |
|                              | B(mm)              |            | 770                 | 850       | 850       | 850        |
|                              | C(mm)              |            | 1250                | 1300      | 1300      | 1300       |
| overall size a×b(mm)         |                    |            | 1200×450            | 1200×450  | 1500×500  | 1500×500   |

Remark : Cooling capacity and input power under condensing temp. at 45 °C

#### 4.6 Air cooled M/H temp racks

| Model                        |                    |            | HLGF2-60MH          | HLGF2-80MH     | HLGF2-100MH    | HLGF2-120MH      |
|------------------------------|--------------------|------------|---------------------|----------------|----------------|------------------|
| Evaporating Temperature( °C) |                    |            | -5℃~8℃              |                |                |                  |
| Refrigerant                  |                    |            | R22                 |                |                |                  |
| Power supply                 |                    |            | 380V/50HZ           |                |                |                  |
| Comp.                        | Type               |            | Semi-Hermetic Screw |                |                |                  |
|                              | Comp. Model        |            | RC2 -100B           | RC2 -140B      | RC2 -180B      | RC2 -230B        |
|                              | Qty.               |            | 2                   | 2              | 2              | 2                |
| Energy adjustment            |                    |            | 33%-50%-66%-100%    |                |                | 25%-50%-75%-100% |
| Cap. & Input                 | Te 0℃              | Cap. (KW)  | 146.6               | 199.8          | 262.2          | 348              |
|                              |                    | Input (KW) | 50.0                | 65.8           | 82.4           | 100.2            |
|                              | Te -5℃             | Cap. (KW)  | 120.8               | 164.8          | 216.2          | 287              |
|                              |                    | Input (KW) | 47.8                | 63.0           | 79.0           | 105.4            |
|                              | Te -10℃            | Cap. (KW)  | 99                  | 135            | 183.6          | 235              |
|                              |                    | Input (KW) | 45.8                | 60.4           | 75.6           | 101.0            |
| Connector                    | Liquid dia.. (mm)  |            | φ76                 | φ76            | φ108           | φ108             |
|                              | Gas out dia.. (mm) |            | φ42                 | φ42            | φ54            | φ54              |
|                              | Discharge (mm)     |            | φ42                 | φ42            | φ76            | φ76              |
|                              | Liquid in (mm)     |            | φ35                 | φ35            | φ42            | φ42              |
| Overall SizeA×B×C(mm)        |                    |            | 2300×1500×1460      | 2300×1500×1460 | 2650×1650×1470 | 3090×1850×1860   |

| Model                        |                    |            | HLGF2-140MH         | HLGF2-160MH    | HLGF2-180MH    | HLGF2-200MH    |
|------------------------------|--------------------|------------|---------------------|----------------|----------------|----------------|
| Evaporating Temperature( °C) |                    |            | -5℃~8℃              |                |                |                |
| Refrigerant                  |                    |            | R22                 |                |                |                |
| Power supply                 |                    |            | 380V/50HZ           |                |                |                |
| Comp.                        | Type               |            | Semi-Hermetic Screw |                |                |                |
|                              | Comp. Model        |            | RC2 -260B           | RC2 -310B      | RC2 -340B      | RC2 -370B      |
|                              | Qty.               |            | 2                   | 2              | 2              | 2              |
| Energy Saving                |                    |            | 25%-50%-75%-100%    |                |                |                |
| Cap. & Input                 | Te 0℃              | Cap. (KW)  | 381.8               | 475.4          | 520.2          | 563.2          |
|                              |                    | Input (KW) | 120.0               | 142.0          | 156.4          | 170.6          |
|                              | Te -5℃             | Cap. (KW)  | 315                 | 392.2          | 429.2          | 464.6          |
|                              |                    | Input (KW) | 115.0               | 136.0          | 149.8          | 163.4          |
|                              | Te -10℃            | Cap. (KW)  | 258                 | 321.2          | 351.4          | 380.4          |
|                              |                    | Input (KW) | 110.0               | 130.4          | 143.6          | 156.6          |
| Connector                    | Liquid dia.. (mm)  |            | φ 108               | φ 108          | φ 108          | φ 133          |
|                              | Gas out dia.. (mm) |            | φ 54                | φ 54           | φ 54           | φ 54           |
|                              | Discharge (mm)     |            | φ 76                | φ 76           | φ 76           | φ 108          |
|                              | Liquid in (mm)     |            | φ 54                | φ 54           | φ 54           | φ 66           |
| Overall Size A×B×C(mm)       |                    |            | 3290×1850×1860      | 3370×2050×1860 | 3370×2050×1860 | 3470×2100×2100 |

| Model                            |                   |            | HLGF3-90MH          | HLGF3-120MH    | HLGF3-150MH    | HLGF3-180MH              |
|----------------------------------|-------------------|------------|---------------------|----------------|----------------|--------------------------|
| Evaporating.<br>Temperature( °C) |                   |            | -5℃~8℃              |                |                |                          |
| Refrigerant                      |                   |            | R22                 |                |                |                          |
| Power supply                     |                   |            | 380V/50HZ           |                |                |                          |
| Comp.                            | Type              |            | Semi-Hermetic Screw |                |                |                          |
|                                  | Comp. Model       |            | RC2 -100B           | RC2 -140B      | RC2 -180B      | RC2 -230B                |
|                                  | Qty.              |            | 3                   | 3              | 3              | 3                        |
| Energy Saving                    |                   |            | 33%-66%-100%        |                |                | 16%-33%-50%-66%-83%-100% |
| Cap. & Input                     | Te 0℃             | Cap. (KW)  | 219.9               | 299.7          | 393.3          | 522                      |
|                                  |                   | Input (KW) | 75.0                | 98.7           | 123.6          | 165.3                    |
|                                  | Te -5℃            | Cap. (KW)  | 181.2               | 247.2          | 324.3          | 430.5                    |
|                                  |                   | Input (KW) | 71.7                | 94.5           | 118.5          | 158.1                    |
|                                  | Te -10℃           | Cap. (KW)  | 148.2               | 202.5          | 265.5          | 352.5                    |
|                                  |                   | Input (KW) | 68.7                | 90.6           | 113.4          | 151.5                    |
| Connector                        | Liquid dia.. (mm) |            | 2× ϕ76              | 2× ϕ76         | 2× ϕ76         | 2× ϕ108                  |
|                                  | Gas out dia. (mm) |            | ϕ35                 | ϕ42            | ϕ54            | ϕ54                      |
|                                  | Discharge (mm)    |            | ϕ42                 | ϕ76            | ϕ76            | ϕ76                      |
|                                  | Liquid in (mm)    |            | ϕ42                 | ϕ54            | ϕ54            | ϕ66                      |
| Overall Size A×B×C(mm)           |                   |            | 2800×1500×1470      | 3000×1600×1780 | 3200×1700×1790 | 3700×1900×1860           |

| Model                            |                    |            | HLGF3-210MH              | HLGF3-240MH    | HLGF3-270MH    | HLGF3-300MH    |
|----------------------------------|--------------------|------------|--------------------------|----------------|----------------|----------------|
| Evaporating.<br>Temperature( °C) |                    |            | -5℃~8℃                   |                |                |                |
| Refrigerant                      |                    |            | R22                      |                |                |                |
| Power supply                     |                    |            | 380V/50HZ                |                |                |                |
| Comp.                            | Type               |            | Semi-Hermetic Screw      |                |                |                |
|                                  | Comp. Model        |            | RC2 -260B                | RC2 -310B      | RC2 -340B      | RC2 -370B      |
|                                  | Qty.               |            | 3                        | 3              | 3              | 3              |
| Energy Saving                    |                    |            | 16%-33%-50%-66%-83%-100% |                |                |                |
| Cap. & Input                     | Te 0℃              | Cap. (KW)  | 572.7                    | 713.1          | 780.3          | 844.8          |
|                                  |                    | Input (KW) | 180.0                    | 213.0          | 234.6          | 255.9          |
|                                  | Te -5℃             | Cap. (KW)  | 472.5                    | 583.3          | 643.8          | 696.9          |
|                                  |                    | Input (KW) | 172.5                    | 204.0          | 224.7          | 245.1          |
|                                  | Te -10℃            | Cap. (KW)  | 387                      | 481.8          | 527.1          | 570.6          |
|                                  |                    | Input (KW) | 165.0                    | 195.6          | 215.4          | 234.9          |
| Connector                        | Liquid dia.. (mm)  |            | 2× ϕ108                  | 2× ϕ108        | 2× ϕ108        | 2× ϕ108        |
|                                  | Gas out dia.. (mm) |            | ϕ54                      | ϕ66            | ϕ66            | ϕ66            |
|                                  | Discharge (mm)     |            | ϕ108                     | ϕ108           | ϕ108           | ϕ108           |
|                                  | Liquid in (mm)     |            | ϕ66                      | ϕ66            | ϕ66            | ϕ66            |
| Overall Size A×B×C(mm)           |                    |            | 3930×2050×2100           | 3930×2040×2100 | 3930×2140×2100 | 3930×2140×2100 |

Remark : Cooling capacity and input power under condensing temp. at 45 °C



#### 4.7 Air cooled L/M temp. racks

| Model                        |                       |            | HLGF-30LH           | HLGF-40LH | HLGF-50LH | HLGF-60LH    |
|------------------------------|-----------------------|------------|---------------------|-----------|-----------|--------------|
| Evaporating Temperature( °C) |                       |            | -15~-20             |           |           |              |
| Refrigerant                  |                       |            | R22                 |           |           |              |
| Power supply                 |                       |            | 380V/50HZ           |           |           |              |
| Comp.                        | Type                  |            | Semi-Hermetic Screw |           |           |              |
|                              | Comp. Model           |            | RC2 -100B           | RC2 -140B | RC2 -180B | RC2 -230B    |
|                              | Qty.                  |            | 66%-100%            |           |           | 50%-75%-100% |
| Cap & Watt                   | Te<br>-20°C           | Cap. (KW)  | 41.2                | 56.2      | 73.8      | 97.9         |
|                              |                       | Input (KW) | 23.8                | 31.4      | 39.4      | 52.5         |
|                              | Te<br>-25°C           | Cap. (KW)  | 33.7                | 45.9      | 60.2      | 79.9         |
|                              |                       | Input (KW) | 23.1                | 30.4      | 38.1      | 50.9         |
|                              | Te<br>-30°C           | Cap. (KW)  | 27.2                | 37        | 48.6      | 64.5         |
|                              |                       | Input (KW) | 21.5                | 28.7      | 36.8      | 49.1         |
| Connect                      | Liquid dia.. (mm)     |            | φ 54                | φ 54      | φ 66      | φ 76         |
|                              | Gas out dia.. (mm)    |            | φ 22                | φ 22      | φ 28      | φ 28         |
|                              | Discharge (mm)        |            | φ 42                | φ 42      | φ 42      | φ 54         |
|                              | Liquid in (mm)        |            | φ 28                | φ 35      | φ 35      | φ 35         |
| Overall Size                 | A (mm)                |            | 1700                | 1700      | 2150      | 2300         |
|                              | B(mm)                 |            | 670                 | 670       | 680       | 770          |
|                              | C(mm)                 |            | 1140                | 1140      | 1150      | 1300         |
|                              | overall size a×b (mm) |            | 1000×390            | 1000×390  | 1200×390  | 1200×450     |

| Model                        |                      |            | HLGF-70LH           | HLGF-80LH | HLGF-90LH | HLGF-100LH |
|------------------------------|----------------------|------------|---------------------|-----------|-----------|------------|
| Evaporating Temperature( °C) |                      |            | -15~-20             |           |           |            |
| Refrigerant                  |                      |            | R22                 |           |           |            |
| Power supply                 |                      |            | 380V/50HZ           |           |           |            |
| Comp.                        | Type                 |            | Semi-Hermetic Screw |           |           |            |
|                              | Comp. Model          |            | RC2 -260B           | RC2 -310B | RC2 -340B | RC2 -370B  |
|                              |                      |            | 50%-75%-100%        |           |           |            |
| Cap & Watt                   | Te<br>-20°C          | Cap. (KW)  | 107.5               | 133.8     | 146.4     | 158.5      |
|                              |                      | Input (KW) | 51.6                | 67.8      | 74.6      | 81.4       |
|                              | Te<br>-25°C          | Cap. (KW)  | 87.7                | 109.2     | 119.5     | 129.3      |
|                              |                      | Input (KW) | 55.4                | 65.6      | 72.2      | 78.8       |
|                              | Te<br>-30°C          | Cap. (KW)  | 70.8                | 88.1      | 96.4      | 104.3      |
|                              |                      | Input (KW) | 44.5                | 52.8      | 58.1      | 63.4       |
| Connect                      | Liquid dia.. (mm)    |            | φ 76                | φ 76      | φ 108     | φ 108      |
|                              | Gas out dia.. (mm)   |            | φ 28                | φ 35      | φ 42      | φ 42       |
|                              | Discharge (mm)       |            | φ 54                | φ 54      | φ 66      | φ 66       |
|                              | Liquid in (mm)       |            | φ 35                | φ 42      | φ 42      | φ 42       |
| Overall Size                 | A(mm)                |            | 2300                | 2600      | 2600      | 2600       |
|                              | B(mm)                |            | 770                 | 850       | 850       | 850        |
|                              | C(mm)                |            | 1300                | 1350      | 1350      | 1300       |
|                              | overall size a×b(mm) |            | 1200×450            | 1500×500  | 1500×500  | 1500×500   |

Remark : Cooling capacity and input power under condensing temp. at 45 °C

#### 4.8 Air cooled L/M temp. racks

| Model                            |                    |            | HLGF2-60LH          | HLGF2-80LH     | HLGF2-100LH    | HLGF2-120LH      |
|----------------------------------|--------------------|------------|---------------------|----------------|----------------|------------------|
| Evaporating.<br>Temperature( °C) |                    |            | -15℃~-20℃           |                |                |                  |
| Refrigerant                      |                    |            | R22                 |                |                |                  |
| Power supply                     |                    |            | 380V/50HZ           |                |                |                  |
| Comp.                            | Type               |            | Semi-Hermetic Screw |                |                |                  |
|                                  | Comp. Model        |            | RC2 -100B           | RC2 -140B      | RC2 -180B      | RC2 -230B        |
|                                  | Qty.               |            | 2                   | 2              | 2              | 2                |
| Energy Saving                    |                    |            | 33%-50%-66%-100%    |                |                | 25%-50%-75%-100% |
| Cap.&Input                       | Te<br>-20℃         | Cap. (KW)  | 82.4                | 112.4          | 147.6          | 195.8            |
|                                  |                    | Input (KW) | 47.6                | 62.8           | 78.8           | 105.0            |
|                                  | Te<br>-25℃         | Cap. (KW)  | 67.4                | 91.8           | 120.4          | 159.8            |
|                                  |                    | Input (KW) | 46.2                | 60.8           | 76.2           | 101.8            |
|                                  | Te<br>-30℃         | Cap. (KW)  | 54.4                | 74             | 97.2           | 129              |
|                                  |                    | Input (KW) | 43.0                | 57.4           | 73.6           | 98.2             |
| Connector                        | Liquid dia.. (mm)  |            | φ 76                | φ 76           | φ 108          | φ 108            |
|                                  | Gas out dia.. (mm) |            | φ35                 | φ 35           | φ 42           | φ 42             |
|                                  | Discharge (mm)     |            | φ 54                | φ 54           | φ 76           | φ 76             |
|                                  | Liquid in (mm)     |            | φ 42                | φ 44           | φ 54           | φ 54             |
| Overall Size A×B×C(mm)           |                    |            | 2300×1500×1460      | 2300×1500×1460 | 2650×1650×1470 | 3090×1850×1860   |

| Model                            |                    |            | HLGF2-140LH         | HLGF2-160LH    | HLGF2-180LH    | HLGF2-200LH    |
|----------------------------------|--------------------|------------|---------------------|----------------|----------------|----------------|
| Evaporating.<br>Temperature( °C) |                    |            | -15℃~-20℃           |                |                |                |
| Refrigerant                      |                    |            | R22                 |                |                |                |
| Power supply                     |                    |            | 380V/50HZ           |                |                |                |
| Comp.                            | Type               |            | Semi-Hermetic Screw |                |                |                |
|                                  | Comp. Model        |            | RC2 -260B           | RC2 -310B      | RC2 -340B      | RC2 -370B      |
|                                  | Qty.               |            | 2                   | 2              | 2              | 2              |
| Energy Saving                    |                    |            | 25%-50%-75%-100%    |                |                |                |
| Cap. & Input                     | Te<br>-20℃         | Cap. (KW)  | 215                 | 267.6          | 292.8          | 317            |
|                                  |                    | Input (KW) | 103.2               | 135.6          | 149.2          | 162.8          |
|                                  | Te<br>-25℃         | Cap. (KW)  | 175.4               | 218.4          | 239            | 258.6          |
|                                  |                    | Input (KW) | 110.8               | 131.2          | 144.4          | 152            |
|                                  | Te<br>-30℃         | Cap. (KW)  | 141.6               | 176.2          | 192.8          | 195.2          |
|                                  |                    | Input (KW) | 107.0               | 126.6          | 139.4          | 152.0          |
| Connector                        | Liquid dia.. (mm)  |            | φ 108               | φ 108          | φ 108          | φ 133          |
|                                  | Gas out dia.. (mm) |            | φ 42                | φ 54           | φ 54           | φ 54           |
|                                  | Discharge (mm)     |            | φ 76                | φ 76           | φ 76           | φ 108          |
|                                  | Liquid in (mm)     |            | φ 54                | φ 54           | φ 54           | φ 66           |
| Overall Size A×B×C(mm)           |                    |            | 3290×1850×1860      | 3370×2010×1860 | 3370×2010×1860 | 3470×2100×2100 |

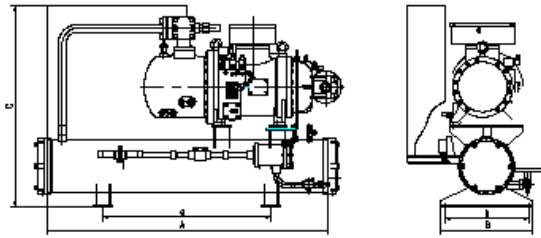
| Model                            |                    |            | HLGF3-90LH          | HLGF3-120LH    | HLGF3-150LH    | HLGF3-180LH                  |
|----------------------------------|--------------------|------------|---------------------|----------------|----------------|------------------------------|
| Evaporating.<br>Temperature( °C) |                    |            | -15℃~-20℃           |                |                |                              |
| Refrigerant                      |                    |            | R22                 |                |                |                              |
| Power supply                     |                    |            | 380V/50HZ           |                |                |                              |
| Comp.                            | Type               |            | Semi-Hermetic Screw |                |                |                              |
|                                  | Comp. Model        |            | RC2 -100B           | RC2 -140B      | RC2 -180B      | RC2 -230B                    |
|                                  | Qty.               |            | 3                   | 3              | 3              | 3                            |
| Energy Saving                    |                    |            | 33%-66%-100%        |                |                | 16%-33%-50%-66%-83<br>%-100% |
| Cap. & Input                     | Te<br>-20℃         | Cap. (KW)  | 123.6               | 168.6          | 211.4          | 293.7                        |
|                                  |                    | Input (KW) | 71.4                | 94.2           | 118.2          | 157.5                        |
|                                  | Te<br>-25℃         | Cap. (KW)  | 101.1               | 137.7          | 180.6          | 239.7                        |
|                                  |                    | Input (KW) | 69.3                | 91.2           | 114.3          | 152.7                        |
|                                  | Te<br>-30℃         | Cap. (KW)  | 81.6                | 111            | 145.8          | 193.5                        |
|                                  |                    | Input (KW) | 64.5                | 86.1           | 110.4          | 147.3                        |
| Connector                        | Liquid dia.. (mm)  |            | 2×φ66               | 2×φ76          | 2×φ76          | 2×φ108                       |
|                                  | Gas out dia.. (mm) |            | φ35                 | φ42            | φ54            | φ54                          |
|                                  | Discharge (mm)     |            | φ54                 | φ76            | φ89            | φ76                          |
|                                  | Liquid in (mm)     |            | φ42                 | φ42            | φ42            | φ54                          |
| Overall Size A×B×C(mm)           |                    |            | 2800×1570×1460      | 3000×1630×1780 | 3200×1690×1790 | 3700×1910×1860               |

| Model                        |                    |            | HLGF3-210LH              | HLGF3-240LH    | HLGF3-270LH    | HLGF3-300LH    |
|------------------------------|--------------------|------------|--------------------------|----------------|----------------|----------------|
| Evaporating Temperature( °C) |                    |            | -15℃~-20℃                |                |                |                |
| Refrigerant                  |                    |            | R22                      |                |                |                |
| Power supply                 |                    |            | 380V/50HZ                |                |                |                |
| Comp.                        | Type               |            | Semi-Hermetic Screw      |                |                |                |
|                              | Comp. Model        |            | RC2 -260B                | RC2 -310B      | RC2 -340B      | RC2 -370B      |
|                              | Qty.               |            | 3                        | 3              | 3              | 3              |
| Energy Saving                |                    |            | 16%-33%-50%-66%-83%-100% |                |                |                |
| Cap. & Input                 | Te<br>-20℃         | Cap. (KW)  | 322.5                    | 401.4          | 439.2          | 475.5          |
|                              |                    | Input (KW) | 154.8                    | 203.4          | 223.8          | 244.2          |
|                              | Te<br>-25℃         | Cap. (KW)  | 263.1                    | 327.6          | 358.5          | 387.9          |
|                              |                    | Input (KW) | 166.2                    | 196.8          | 216.6          | 236.4          |
|                              | Te<br>-30℃         | Cap. (KW)  | 212.4                    | 264.3          | 289.2          | 312.9          |
|                              |                    | Input (KW) | 160.5                    | 189.9          | 209.1          | 228.0          |
| Connect or                   | Liquid dia.. (mm)  |            | 2×φ108                   | 2×φ108         | 2×φ108         | 2×φ108         |
|                              | Gas out dia.. (mm) |            | φ54                      | φ54            | φ54            | φ54            |
|                              | Discharge (mm)     |            | φ108                     | φ108           | φ108           | φ108           |
|                              | Liquid in (mm)     |            | φ54                      | φ66            | φ66            | φ66            |
| Overall Size A×B×C(mm)       |                    |            | 3930×2040×2100           | 3930×2040×2100 | 3930×2140×2100 | 3930×2140×2100 |

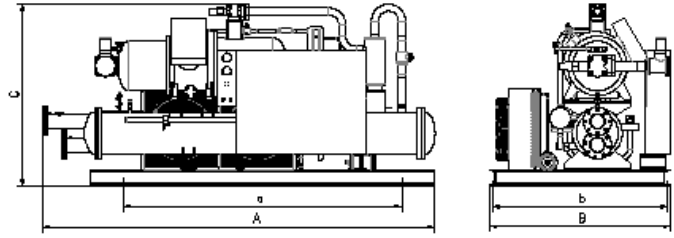
Remark : Cooling capacity and input power under condensing temp. at 45 °C

## 5. Diagrams for Overall sizes

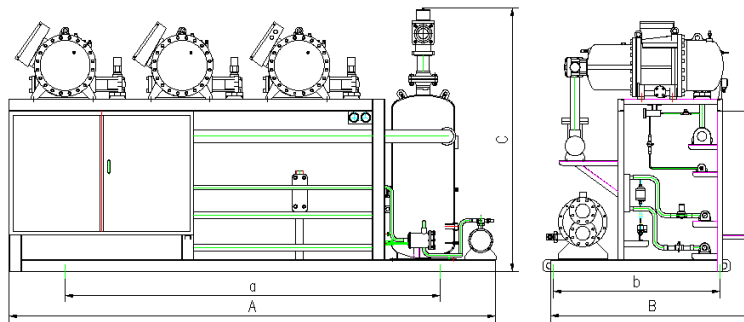
1) HLGS××MH with single compressor:



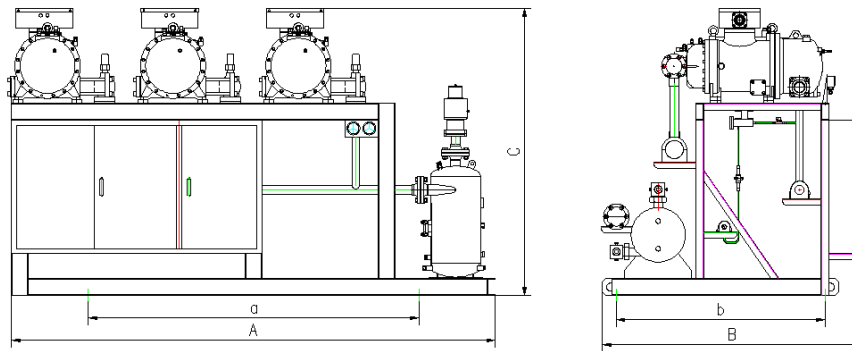
2) HLGS××LH with single compressor:



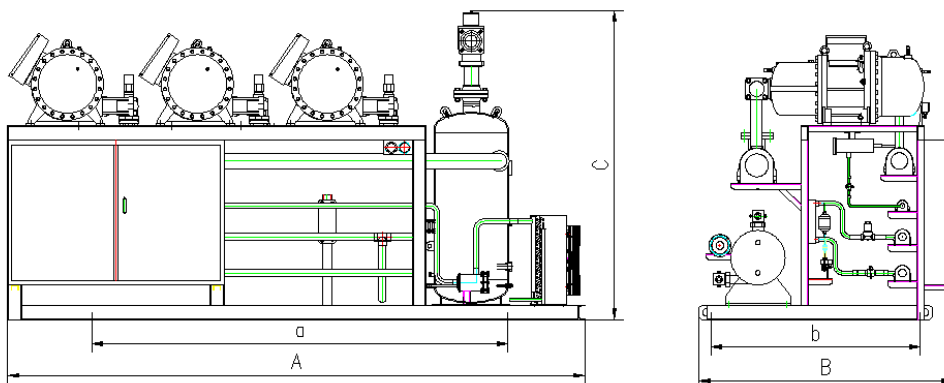
3) HLGS×—××H water cooled racks :



4) HLGf×—××MH air cooled racks :



5) HLGf×—××LH air cooled racks :



## HLG-F Series 2 stage Screw Compressor racks

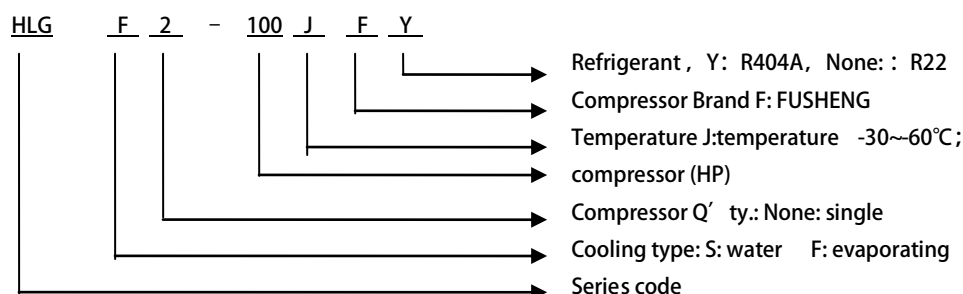
### 1. Product description

This HLG-F series products features 2 stage screw compressors, are applicable to fast freezing tunnel and fast freezing cold rooms.

This Series features 2 stage screw compressors, resulted a high efficiency, low vibration, and high reliability.

- ◆ Compared with the single stage compressor, the EER is higher by 50%.
- ◆ It can work at the lowest evaporation temperature, for R22 at -60°C, for R404a at -65°C.
- ◆ All this series products have a complete set protection devices for Over heating, over loading, wrong phase sequency, oil and high/low pressure etc.
- ◆ By PLC controller, to adjust capacity according to cooling capacity required for energy saving.

### 2. Model code



### 3. Main components

- |                                     |                |                             |
|-------------------------------------|----------------|-----------------------------|
| ●Twøstage screw Compressor.         | ●Receiver      | ●Gas separator              |
| ●Oil separator                      | ●Filter vat    | ●Suction Filter             |
| ●Oil pump(only for parallel unit)   | ●Sight glasses | ●Highlow pressure protector |
| ●Oil cooler                         | ●intercooler   | ●Pressure gauge             |
| ●Condenser(only for water -cooling) | ●Liquid valve  | ●Unit control box(PLC)      |

(Condenser is optional for evaporative condenser)

## 4. Specifications:

### 4.1 Refrigerant R22:

#### 4.1.1 Water cooled Condensing Units :

| Model                          |                              |            | HLGS-60JF                    | HLGS-96JF      | HLGS-125JF     | HLGS2-120JF    |
|--------------------------------|------------------------------|------------|------------------------------|----------------|----------------|----------------|
| Evaporatin g. Temperature( °C) |                              |            | -30~~60                      |                |                |                |
| Refrigerant                    |                              |            | R22                          |                |                |                |
| Power supply                   |                              |            | 380V/50HZ                    |                |                |                |
| Comp.                          | Type                         |            | semi-hermetic 2 -stage screw |                |                |                |
|                                | Comp. Model                  |            | SDL220B                      | SDL330B        | SDL450B        | SDL220B        |
|                                | Qty.                         |            | 1                            | 1              | 1              | 2              |
| Condenser<br>Cap.&Watt         | Capacity (KW)                |            | Shell & Copper Tube          |                |                |                |
|                                | Oil Cooler Type              |            | 25                           | 35             | 50             | 50             |
|                                | Oil Cooler Water flow (m³/h) |            | DN65                         | DN80           | DN100          | DN100          |
|                                | Oil Cooler Connector (mm)    |            | DN32                         | DN32           | DN32           | DN40           |
| Cap. & Watt                    | Te<br>-30℃                   | Cap. (KW)  | 91.8                         | 136.9          | 184.1          | 183.6          |
|                                |                              | Input (KW) | 45.4                         | 66.8           | 88             | 90.8           |
|                                | Te<br>-40℃                   | Cap. (KW)  | 63.9                         | 93.9           | 125.2          | 127.8          |
|                                |                              | Input (KW) | 42.2                         | 61.1           | 80             | 84.4           |
|                                | Te<br>-50℃                   | Cap. (KW)  | 41.3                         | 59.6           | 78.7           | 82.6           |
|                                |                              | Input (KW) | 42.6                         | 60.7           | 79.9           | 85.2           |
|                                | Te<br>-60℃                   | Cap. (KW)  | 22.0                         | 32.0           | 43.5           | 44.0           |
|                                |                              | Input (KW) | 28.7                         | 41.8           | 56.8           | 57.4           |
| Liquid dia. (mm)               |                              |            | DN65                         | DN80           | DN100          | DN100          |
| Gas out dia. (mm)              |                              |            | φ28                          | φ35            | φ42            | φ42            |
| Overall Size (L×W×H)           |                              |            | 2100×1200×1650               | 2100×1200×1900 | 2600×1200×1900 | 3100×2100×2200 |

| Model                        |                              |            | HLGS2-192JF                  | HLGS2-250JF    | HLGS3-288JF    | HLGS3-375JF    |
|------------------------------|------------------------------|------------|------------------------------|----------------|----------------|----------------|
| Evaporating Temperature( °C) |                              |            | -30~-60                      |                |                |                |
| Refrigerant                  |                              |            | R22                          |                |                |                |
| Power supply                 |                              |            | 380V/50HZ                    |                |                |                |
| Comp.                        | Type                         |            | semi-hermetic 2 -stage screw |                |                |                |
|                              | Comp. Model                  |            | SDL330B                      | SDL450B        | SDL330B        | SDL450B        |
|                              | Qty.                         |            | 2                            | 2              | 3              | 3              |
| Condenser                    | Capacity (KW)                |            | Shell & Copper Tube          |                |                |                |
|                              | Oil Cooler Type              |            | 70                           | 100            | 105            | 150            |
|                              | Oil Cooler Water flow (m³/h) |            | DN100                        | DN125          | DN125          | DN150          |
|                              | Oil Cooler Connector (mm)    |            | DN40                         | DN50           | DN50           | DN50           |
| Connector                    | Te<br>-30℃                   | Cap. (KW)  | 273.8                        | 368.2          | 410.7          | 552.3          |
|                              |                              | Input (KW) | 133.6                        | 176            | 200.4          | 264            |
|                              | Te<br>-40℃                   | Cap. (KW)  | 187.8                        | 250.4          | 281.7          | 375.6          |
|                              |                              | Input (KW) | 132.2                        | 160            | 198.3          | 240            |
|                              | Te<br>-50℃                   | Cap. (KW)  | 119.2                        | 157.4          | 178.8          | 236.1          |
|                              |                              | Input (KW) | 121.4                        | 159.8          | 182.1          | 239.7          |
|                              | Te<br>-60℃                   | Cap. (KW)  | 64.0                         | 87.0           | 96.0           | 130.5          |
|                              |                              | Input (KW) | 83.6                         | 113.6          | 125.4          | 170.4          |
| sizes                        | Liquid dia. (mm)             |            | DN125                        | DN100×2        | DN100×2        | DN125×2        |
|                              | Gas out dia. (mm)            |            | φ54                          | φ54            | φ54            | φ67            |
| Overall Size (A×B×C)         |                              |            | 3100×2100×2200               | 3400×2100×2200 | 4200×2100×2200 | 4200×2100×2200 |

Remark : 1) Cooling capacity and input power under condensing temp. at 40 °C 2) Rated water flow including water for oiler cooler.



#### 4.1.2 Evaporative Condensing Units:

| Model                         |                              | HLGF-60JF                    | HLGF-96JF | HLGF-125JF | HLGF2-120JF |
|-------------------------------|------------------------------|------------------------------|-----------|------------|-------------|
| Evaporating. Temperature( °C) |                              | -30~60                       |           |            |             |
| Refrigerant                   |                              | R22                          |           |            |             |
| Power supply                  |                              | 380V/50HZ                    |           |            |             |
| Comp.                         | Type                         | semi-hermetic 2 -stage screw |           |            |             |
|                               | Comp. Model                  | SDL220B                      | SDL330B   | SDL450B    | SDL220B     |
|                               | Qty.                         | 1                            | 1         | 1          | 2           |
| Condenser                     | Type                         | Evaporative Condenser        |           |            |             |
|                               | Capacity (KW)                | 150                          | 210       | 290        | 290         |
|                               | Oil Cooler Type              | Shell and Copper Tube        |           |            |             |
|                               | Oil Cooler Water flow (m³/h) | 3                            | 4         | 5          | 6           |
|                               | Oil Cooler Connector (mm)    | DN32                         | DN32      | DN32       | DN40        |
| Connector                     | Te<br>-30°C                  | Cap. (KW)                    | 94.7      | 142.7      | 190.1       |
|                               |                              | Input (KW)                   | 40.5      | 59.8       | 78.7        |
|                               | Te<br>-40°C                  | Cap. (KW)                    | 65.7      | 97.7       | 128.8       |
|                               |                              | Input (KW)                   | 37.3      | 54.4       | 70.5        |
|                               | Te<br>-50°C                  | Cap. (KW)                    | 42.3      | 61.7       | 80.4        |
|                               |                              | Input (KW)                   | 37.1      | 53.2       | 69.3        |

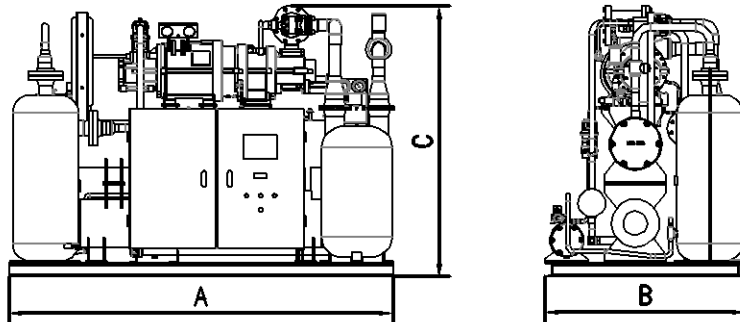
|                      |                   |                |                |                |                |
|----------------------|-------------------|----------------|----------------|----------------|----------------|
| Overall sizes        | Liquid dia. (mm)  | DN65           | DN80           | DN100          | DN100          |
|                      | Gas out dia. (mm) | φ28            | φ35            | φ42            | φ42            |
|                      | Discharge (mm)    | DN50           | DN80           | DN80           | DN80           |
|                      | Liquid in (mm)    | φ35            | φ42            | φ54            | φ54            |
| Overall Size (A×B×C) |                   | 2100×1200×1650 | 2100×1200×1900 | 2600×1200×1900 | 3100×2100×2200 |

| Model                         |                              | HLGF2-192JF                  | HLGF2-250JF    | HLGF3-288JF    | HLGF3-375JF    |
|-------------------------------|------------------------------|------------------------------|----------------|----------------|----------------|
| Evaporating. Temperature( °C) |                              | -30~60                       |                |                |                |
| Refrigerant                   |                              | R22                          |                |                |                |
| Power supply                  |                              | 380V/50HZ                    |                |                |                |
| Comp.                         | Type                         | semi-hermetic 2 -stage screw |                |                |                |
|                               | Comp. Model                  | SDL330B                      | SDL450B        | SDL330B        | SDL450B        |
|                               | Qty.                         | 2                            | 2              | 3              | 3              |
| Condenser                     | Capacity (KW)                | Te 式 Condenser               |                |                |                |
|                               | Oil Cooler Type              | 425                          | 575            | 640            | 865            |
|                               | Oil Cooler Water flow (m³/h) | Shell and Copper Tube        |                |                |                |
|                               | Oil Cooler Connector (mm)    | 8                            | 10             | 12             | 15             |
|                               | Capacity (KW)                | DN40                         | DN50           | DN50           | DN50           |
| Connector                     | Te<br>-30°C                  | Cap. (KW)                    | 285.4          | 380.2          | 428.1          |
|                               |                              | Input (KW)                   | 119.6          | 157.4          | 179.4          |
|                               | Te<br>-40°C                  | Cap. (KW)                    | 195.4          | 257.6          | 293.1          |
|                               |                              | Input (KW)                   | 108.8          | 141            | 163.2          |
|                               | Te<br>-50°C                  | Cap. (KW)                    | 123.4          | 160.8          | 185.1          |
|                               |                              | Input (KW)                   | 106.4          | 138.6          | 159.6          |
| Overall sizes                 | Te<br>-60°C                  | Cap. (KW)                    | 65.4           | 88.8           | 98.1           |
|                               |                              | Input (KW)                   | 76.4           | 103.8          | 114.6          |
|                               | Liquid dia. (mm)             | DN125                        | DN100×2        | DN100×2        | DN125×2        |
|                               | Gas out dia. (mm)            | φ54                          | φ54            | φ54            | φ67            |
|                               | Discharge (mm)               | DN100                        | DN100          | DN100          | DN125          |
|                               | Liquid in (mm)               | φ67                          | φ67            | φ67            | φ67            |
| Overall Size (A×B×C)          |                              | 3100×2100×2200               | 3400×2100×2200 | 4200×2100×2200 | 4200×2100×2200 |

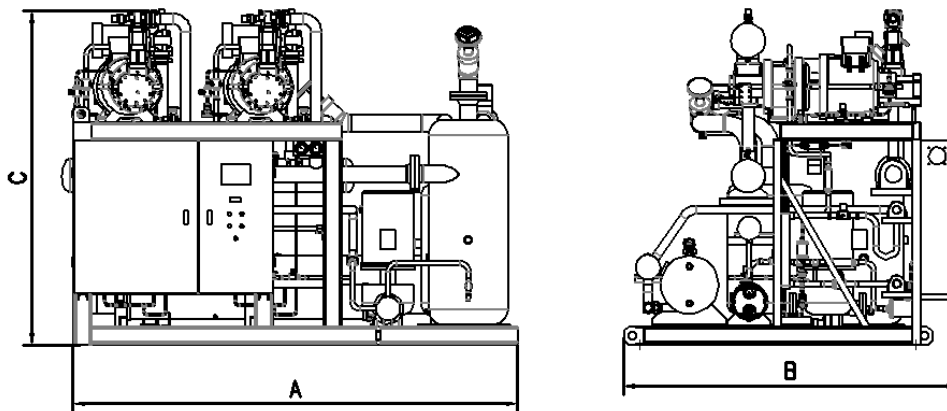
Remark: Cooling capacity under condensing temp. at 35 °C

## 5. Diagrams for Overall sizes

### 1) Single compressor racks :



### 2) Multi Compressor Racks :



## Statements

1. For detailed specification of all types of compressors, please refer to sample data of each compressor brand.
2. For condensing unit, the components listed are for the standard product, the customer may increase or decrease it according to their requirement.
3. Our company can develop and manufacture all kinds of non-standard equipments on customer's requirements. For detailed specification requirements contact the sales or technical departments.
4. The company reserves the right of any specification changes in this document without prior or notice; confirm it before putting your order.
5. For more issues, consult our technical department.