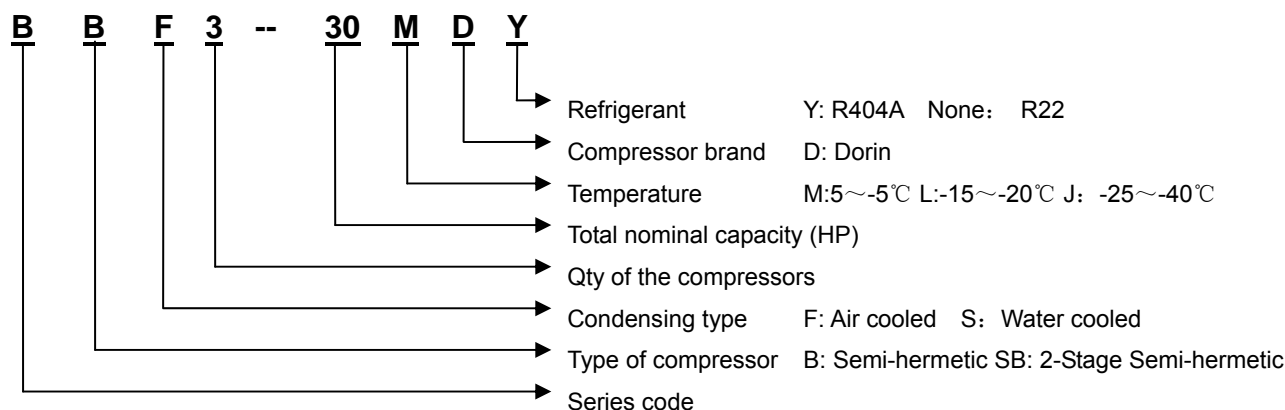


# BBD series Compressor racks (Dorin Compressors)

## 1. Product description:

- ◆ Italy Dorin Semi-hermetic compressor
- ◆ Multi-compressors provide powerful cooling capacity
- ◆ Multilevel energy adjusting was applied for different cooling capacity which makes this equipment more economical
- ◆ Efficient & reliability

## 2. Nomenclature:



## 3. Standard configuration:

### Air cooled paralleled units

- Compressor ● Crankcase heater ● Discharge Check valve ● Vibration Eliminator ● Oil separator ● Oil level regulator
- Oil receiver ● Oil Filter Drier ● Pressure differential check valve ● Receiver ● Filter Drier ● Sight glass
- Suction accumulator ● Suction Filter Drier ● Pressure control ● Pressure gauge ● Oil pressure protector
- Over head fan(Low temperature units) ● Electrical control box

### Water cooled paralleled units:

- Compressor ● Crankcase heater ● Discharge Check valve ● Vibration Eliminator ● Oil separator ● Oil level regulator
- Oil receiver ● Oil Filter Drier ● Pressure differential check valve ● Water cooled Condenser ● Filter Drier ● Sight glass
- Suction accumulator ● Pressure control ● Pressure gauge ● Oil pressure protector ● Over head fan(Low temperature units)
- Electrical control box

## 4. Specification

### 4.1 Air cooled paralleled units

#### 4.1.1 2 compressors unit of air cooled middle & high temperature

Model		BBF2-									
		20MD	30MD	40MD	50MD	60MD	70MD	80MD	90MD	100MD	
Temperature(°C)		10°C~-25°C									
Refrigerant		R22									
Power Supply		380V/50Hz									
Compressor	Type	Semi-hermetic piston compressor									
	Model	K1000CC	K1500CC	K2000CC	K2500CC	K3000CC	Y3560CC	Y4060CC	Y4560CC	Y5060CC	
	Qty	2	2	2	2	2	2	2	2	2	
Capacity & Input	Eavp 0°C	Capacity (W)	54400	66000	81800	103000	117940	152600	176280	193200	206800
		Input (W)	20.4	25.0	30.2	39.4	46.2	58.8	62.8	68.2	76.6
	Eavp -5°C	Capacity (W)	44600	54800	68000	85680	98000	125600	145600	158200	170200
		Input (W)	19.0	23.4	28.4	37.0	43.0	55.2	59.0	63.6	72.2
	Eavp -10°C	Capacity (W)	36000	45080	56200	70600	80800	102000	118860	127600	138500
		Input (W)	17.4	21.8	26.3	34.4	39.8	51.0	55.0	59.0	67.0
Pipe	Suction Pipe (mm)	φ42	φ54	φ54	φ79	φ79	φ79	φ79	φ79	φ79	
	Liquid out Pipe (mm)	φ22	φ22	φ28	φ28	φ28	φ35	φ35	φ35	φ35	
	Discharge Pipe (mm)	φ35	φ35	φ42	φ42	φ42	φ54	φ54	φ54	φ54	
	Liquid in Pipe (mm)	φ28	φ28	φ35	φ35	φ35	φ42	φ42	φ42	φ42	
Overall Dimension	L(mm)	2550	2550	2550	2550	2550	2550	2550	2550	2550	
	W(mm)	1200	1200	1200	1200	1200	1200	1200	1200	1200	
	H(mm)	1850	1850	1850	1850	1850	1850	1850	1850	1850	

Remarks: 1. Test condition: condensing temperature at 50°C. 2. The condenser selected at the evap temp as -7°C

#### 4.1.2 3 compressors unit of air cooled middle & high temperature

Model		BBF3-									
		30MD	45MD	60MD	75MD	90MD	105MD	120MD	135MD	150MD	
Temperature(°C)		10°C~-25°C									
Refrigerant		R22									
Power Supply		380V/50Hz									
Compressor	Type	Semi-hermetic piston compressor									
	Model	K1000CC	K1500CC	K2000CC	K2500CC	K3000CC	Y3560CC	Y4060CC	Y4560CC	Y5060CC	
	Qty	3	3	3	3	3	3	3	3	3	
Capacity & Input	Eavp 0°C	Capacity (W)	81600	99000	122700	154500	176910	228900	264420	289800	310200
		Input (W)	30.6	37.5	45.3	59.1	69.3	88.2	94.2	102.3	114.9
	Eavp -5°C	Capacity (W)	66900	82200	102000	128520	147000	188400	218400	237300	255300
		Input (W)	28.5	35.2	42.6	55.6	64.6	82.8	88.5	95.4	108.3
	Eavp -10°C	Capacity (W)	54000	67620	84300	105900	121200	153000	178290	191400	207750
		Input (W)	26.1	32.7	39.4	51.6	59.7	76.5	82.5	88.5	100.5
Pipe	Suction Pipe (mm)	φ54	φ79	φ79	φ79	φ79	φ108	φ108	φ108	φ108	
	Liquid out Pipe (mm)	φ22	φ28	φ28	φ35	φ35	φ42	φ42	φ42	φ42	
	Discharge Pipe (mm)	φ35	φ42	φ42	φ54	φ54	φ66	φ66	φ66	φ66	
	Liquid in Pipe (mm)	φ28	φ35	φ35	φ42	φ42	φ54	φ54	φ54	φ54	
Overall Dimension	L(mm)	3150	3150	3150	3150	3150	3150	3150	3150	3150	
	W(mm)	1000	1000	1000	1000	1000	1000	1000	1000	1000	
	H(mm)	1850	1850	1850	1850	1850	1850	2000	2000	2000	

Remarks: 1. Test condition: condensing temperature at 50°C. 2. The condenser selected at the evap temp as -7°C

#### 4.1.3 4 compressors unit of air cooled middle & high temperature

Model		BBF4-									
		40MD	60MD	80MD	100MD	120MD	140MD	160MD	180MD	200MD	
Temperature(°C)		10°C~-25°C									
Refrigerant		R22									
Power Supply		380V/50Hz									
Compressor	Type	Semi-hermetic piston compressor									
	Model	K1000CC	K1500CC	K2000CC	K2500CC	K3000CC	Y3560CC	Y4060CC	Y4560CC	Y5060CC	
	Qty	4	4	4	4	4	4	4	4	4	
Capacity & Input	Eavp °C	Capacity (W)	108800	132000	163600	206000	235880	305200	352560	386400	413600
		Input (W)	40.8	50.0	60.4	78.8	92.4	117.6	125.6	136.4	153.2
	Eavp 5°C	Capacity (W)	89200	109600	136000	171360	196000	251200	291200	316400	340400
		Input (W)	38.0	46.9	56.8	74.1	86.1	110.4	118.0	127.2	144.4
	Eavp -10°C	Capacity (W)	72000	90160	112400	141200	161600	204000	237720	255200	277000
		Input (W)	34.8	43.6	52.6	68.8	79.6	102.0	110.0	118.0	134.0
Pipe	Suction Pipe (mm)	φ54	φ79	φ79	φ79	φ108	φ108	φ140	φ140	φ140	
	Liquid out Pipe (mm)	φ28	φ28	φ35	φ35	φ42	φ42	φ42	φ42	φ42	
	Discharge Pipe (mm)	φ42	φ54	φ54	φ54	φ66	φ66	φ79	φ79	φ79	
	Liquid in Pipe (mm)	φ35	φ35	φ42	φ42	φ54	φ54	φ54	φ54	φ54	
Overall Dimension	L(mm)	3800	3800	3800	3800	3800	3800	3800	3800	3800	
	W(mm)	1000	1000	1000	1000	1000	1000	1000	1000	1000	
	H(mm)	1850	1850	1850	1850	2000	2000	2000	2000	2000	

Remarks: 1. Test condition: condensing temperature at 50°C. 2. The condenser selected at the evap temp as -7°C

#### 4.1.4 5 compressors unit of air cooled middle & high temperature

Model		BBF5-									
		50MD	75MD	100MD	125MD	150MD	175MD	200MD	225MD	250MD	
Temperature(°C)		10°C~-25°C									
Refrigerant		R22									
Power Supply		380V/50Hz									
Compressor	Type	Semi-hermetic piston compressor									
	Model	K1000CC	K1500CC	K2000CC	K2500CC	K3000CC	Y3560CC	Y4060CC	Y4560CC	Y5060CC	
	Qty	5	5	5	5	5	5	5	5	5	
Capacity & Input	Eavp °C	Capacity (W)	136000	165000	204500	257500	294850	381500	440700	483000	517000
		Input (W)	51.0	62.5	75.5	98.5	115.5	147.0	157.0	170.5	191.5
	Eavp 5°C	Capacity (W)	111500	137000	170000	214200	245000	314000	364000	395500	425500
		Input (W)	47.5	58.6	71.0	92.6	107.7	138.0	147.5	159.0	180.5
	Eavp -10°C	Capacity (W)	90000	112700	140500	176500	202000	255000	297150	319000	346250
		Input (W)	43.5	54.5	65.7	86.0	99.5	127.5	137.5	147.5	167.5
Pipe	Suction Pipe (mm)	φ79	φ79	φ79	φ108	φ140	φ140	φ140	φ140	φ140	
	Liquid out Pipe (mm)	φ28	φ35	φ35	φ42	φ42	φ42	φ42	φ42	φ42	
	Discharge Pipe (mm)	φ54	φ54	φ54	φ66	φ79	φ79	φ79	φ79	φ79	
	Liquid in Pipe (mm)	φ35	φ42	φ42	φ54	φ54	φ54	φ54	φ54	φ54	
Overall Dimension	L(mm)	4450	4450	4450	4450	4450	4450	4450	4450	4450	
	W(mm)	1000	1000	1000	1000	1000	1000	1000	1000	1000	
	H(mm)	1850	1850	1850	2000	2000	2000	2000	2000	2000	

Remarks: 1. Test condition: condensing temperature at 50°C.

2. The condenser selected at the evap temp as -7°C

#### 4.1.5 2 compressors unit of air cooled middle & low temperature

Model		BBF2-							
		20LD	30LD	50LD	60LD	70LD	80LD	90LD	
Temperature(°C)		-5°C~-40°C							
Refrigerant		R22							
Power Supply		380V/50Hz							
Compressor	Type	Semi-hermetic piston compressor							
	Model	K1000CS	K1500CS	K2500CB	Y3060CB	Y3560CB	Y4060CB	Y4560CB	
	Qty	2	2	2	2	2	2	2	
Capacity & Input	Eavp 20°C	Capacity (W)	29800	36280	54100	65620	76020	83140	91040
		Input (W)	18.7	21.6	33.0	45.7	53.4	55.4	56.9
	Eavp 25°C	Capacity (W)	23020	27900	41760	50680	58420	64080	71320
		Input (W)	16.0	19.0	29.6	40.4	46.8	48.4	50.3
	Eavp -30°C	Capacity (W)	17260	20860	31280	38020	43700	48180	54460
		Input (W)	13.6	16.5	26.0	34.8	40.0	41.6	43.6
Pipe	Suction Pipe (mm)	φ54	φ54	φ79	φ79	φ79	φ79	φ79	
	Liquid out Pipe (mm)	φ22	φ22	φ28	φ28	φ28	φ28	φ28	
	Discharge Pipe (mm)	φ35	φ35	φ42	φ42	φ42	φ54	φ54	
	Liquid in Pipe (mm)	φ22	φ22	φ35	φ35	φ35	φ35	φ35	
Overall Dimension	L(mm)	2500	2500	2500	2500	2500	2500	2500	
	W(mm)	1000	1000	1000	1000	1000	1000	1000	
	H(mm)	1850	1850	1850	1850	1850	1850	1850	

- Remarks: 1. Test condition: condensing temperature at 50°C.  
2. DTC spray system is necessary at low temperature condition.  
3. The condenser selected at the evap temp as -25°C

#### 4.1.6 Triple compressor units of air cooled middle & low temperature

Model		BBF3-							
		30LD	45LD	75LD	90LD	105LD	120LD	135LD	
Temperature(°C)		-5°C~-40°C							
Refrigerant		R22							
Power Supply		380V/50Hz							
Compressor	Type	Semi-hermetic piston compressor							
	Model	K1000CS	K1500CS	K2500CB	Y3060CB	Y3560CB	Y4060CB	Y4560CB	
	Qty	3	3	3	3	3	3	3	
Capacity & Input	Eavp -20°C	Capacity (W)	44700	54420	81150	98430	114030	124710	136560
		Input (W)	28.0	32.4	49.4	68.6	80.1	83.1	85.4
	Eavp -25°C	Capacity (W)	34530	41850	62640	76020	87630	96120	106980
		Input (W)	24.0	28.6	44.4	60.7	70.3	72.6	75.5
	Eavp -30°C	Capacity (W)	25890	31290	46920	57030	65550	72270	81690
		Input (W)	20.4	24.8	39.0	52.1	60.0	62.4	65.5
Pipe	Suction Pipe (mm)	φ54	φ54	φ79	φ79	φ108	φ108	φ108	
	Liquid out Pipe (mm)	φ22	φ22	φ28	φ28	φ35	φ35	φ35	
	Discharge Pipe (mm)	φ42	φ42	φ42	φ42	φ54	φ54	φ54	
	Liquid in Pipe (mm)	φ28	φ28	φ35	φ35	φ42	φ42	φ42	
Overall Dimension	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	1850	1850	

- Remarks: 1. Test condition: condensing temperature at 50°C.

2. DTC spray system is necessary at low temperature condition.

3. The condenser selected at the evap temp as -25°C

#### 4.1.7 4 compressor units of air cooled middle & low temperature

Model		BBF4-							
		40LD	60LD	100LD	120LD	140LD	160LD	180LD	
Temperature(°C)		-5°C~-40°C							
Refrigerant		R22							
Power Supply		380V/50Hz							
Compressor	Type	Semi-hermetic piston compressor							
	Model	K1000CS	K1500CS	K2500CB	Y3060CB	Y3560CB	Y4060CB	Y4560CB	
	Qty	4	4	4	4	4	4	4	
Capacity & Input	Eavp -20°C	Capacity (W)	59600	72560	108200	131240	152040	166280	182080
		Input (W)	37.32	43.2	65.8	91.5	106.8	110.8	113.8
	Eavp -25°C	Capacity (W)	46040	55800	83520	101360	116840	128160	142640
		Input (W)	32.0	38.1	59.2	80.9	93.7	96.8	100.6
	Eavp -30°C	Capacity (W)	34520	41720	62560	76040	87400	96360	108920
		Input (W)	27.2	33.0	52.0	69.5	80.0	83.2	87.3
Pipe	Suction Pipe (mm)	φ79	φ79	φ79	φ108	φ108	φ108	φ108	
	Liquid out Pipe (mm)	φ22	φ28	φ28	φ35	φ35	φ35	φ35	
	Discharge Pipe (mm)	φ42	φ42	φ54	φ54	φ54	φ54	φ66	
	Liquid in Pipe (mm)	φ28	φ35	φ35	φ42	φ42	φ42	φ42	
Overall Dimension	L(mm)	3800	3800	3800	3800	3800	3800	3800	
	W(mm)	1000	1000	1000	1000	1000	1000	1000	
	H(mm)	1850	1850	1850	1850	1850	2000	2000	

Remarks: 1. Test condition: condensing temperature at 50°C. 2. DTC spray system is necessary at low temperature condition.

3. The condenser selected at the evap temp as -25°C

#### 4.1.8 5 compressor units of air cooled middle & low temperature

Model		BBF5-							
		50LD	75LD	125LD	150LD	175LD	200LD	225LD	
Temperature(°C)		-5°C~-40°C							
Refrigerant		R22							
Power Supply		380V/50Hz							
Compressor	Type	Semi-hermetic piston compressor							
	Model	K1000CS	K1500CS	K2500CB	Y3060CB	Y3560CB	Y4060CB	Y4560CB	
	Qty	5	5	5	5	5	5	5	
Capacity & Input	Eavp -20°C	Capacity (W)	74500	90700	135250	164050	190050	207850	227600
		Input (W)	46.7	54.0	82.3	114.4	133.5	138.5	142.3
	Eavp -25°C	Capacity (W)	57550	69750	104400	126700	146050	160200	178300
		Input (W)	40.0	47.6	74.05	101.1	117.1	121.0	125.8
	Eavp -30°C	Capacity (W)	43150	52150	78200	95050	109250	120450	136150
		Input (W)	34	41.3	65.0	86.9	100.0	104.0	109.1
Pipe	Suction Pipe (mm)	φ79	φ79	φ108	φ108	φ108	φ108	φ108	
	Liquid out Pipe (mm)	φ28	φ28	φ35	φ35	φ35	φ42	φ42	
	Discharge Pipe (mm)	φ42	φ54	φ54	φ54	φ66	φ66	φ66	
	Liquid in Pipe (mm)	φ35	φ35	φ42	φ42	φ42	φ54	φ54	
Overall Dimension	L(mm)	4450	4450	4450	4450	4450	4450	4450	
	W(mm)	1000	1000	1000	1000	1000	1000	1000	
	H(mm)	1850	1850	1850	1850	2000	2000	2000	

Remarks: 1. Test condition: condensing temperature at 50°C. 2. DTC spray system is necessary at low temperature condition.  
3. The condenser selected at the evap temp as -25°C

## 4.2 Water cooled paralleled units

### 4.2.1 Double compressor units of air cooled middle & high temperature

Model		BBS2-									
		20MD	30MD	40MD	50MD	60MD	70MD	80MD	90MD	100MD	
Temperature(°C)		0°C~-25°C									
Refrigerant		R22									
Power Supply		380V/50Hz									
Compressor	Type	Semi-hermetic piston compressor									
	Model	K1000CC	K1500CC	K2000CC	K2500CC	K3000CC	Y3560CC	Y4060CC	Y4560CC	Y5060CC	
	Qty	2	2	2	2	2	2	2	2	2	
Condenser	Type	Shell & tube									
	Water	16	19	23	30	35	45	50	55	60	
	Pipe	2"	2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	3"	3"	
Capacity & Input	Eavp 0°C	Capacity	61800	75100	92860	116400	133400	175660	200300	214320	234180
		Input (W)	17.7	21.6	26.1	33.8	40.6	51.4	54.9	59.6	66.9
	Eavp -5°C	Capacity	51060	62620	77420	97000	111000	145440	166100	175940	193560
		Input (W)	16.8	20.8	25.0	32.2	38.4	48.8	51.6	55.8	64.1
	Eavp -10°C	Capacity	41720	51780	64000	80100	91600	119140	136440	142640	158320
		Input (W)	15.9	19.6	23.5	30.3	35.9	45.8	48.2	51.7	60.4
Pipe	Suction Pipe	φ42	φ54	φ54	φ67	φ67	φ79	φ79	φ79	φ79	
	Discharge Pipe	φ22	φ22	φ28	φ28	φ28	φ35	φ35	φ35	φ35	
Overall Dimension	L(mm)	2300	2300	2300	2300	2300	2300	2300	2300	2300	
	W(mm)	1250	1250	1250	1250	1250	1250	1250	1250	1250	
	H(mm)	1850	1850	1850	1850	1850	1850	1850	1850	1850	

Remarks: The test condition for the capacity and input at the condensing temperature 40°C

### 4.2.2 Triple compressor units of air cooled middle & high temperature

Model		BBS3-									
		30MD	45MD	60MD	75MD	90MD	105MD	120MD	135MD	150MD	
Temperature(°C)		0°C~-25°C									
Refrigerant		R22									
Power Supply		380V/50Hz									
Compressor	Type	Semi-hermetic piston compressor									
	Model	K1000CC	K1500CC	K2000CC	K2500CC	K3000CC	Y3560CC	Y4060CC	Y4560CC	Y5060CC	
	Qty	3	3	3	3	3	3	3	3	3	
Condenser	Type	Shell & tube									
	Water flow(m <sup>3</sup> /h)	24	29	35	45	50	65	75	82	100	
	Pipe	2-1/2"	2-1/2"	2-1/2"	2-1/2"	3"	4"	4"	4"	4"	
Capacity & Input	Eavp 0°C	Capacity	92700	112650	139290	174600	200100	263490	300450	321480	351270
		Input (W)	26.6	32.4	39.2	50.7	61.0	77.2	82.3	89.4	100.4
	Eavp -5°C	Capacity	76590	93930	116130	145500	166500	218160	249150	263910	290340
		Input (W)	25.26	31.2	37.5	48.3	57.63	73.23	77.4	83.7	96.12
	Eavp -10°C	Capacity	62580	77670	96000	120150	137400	178710	204660	213960	237480
		Input (W)	23.8	29.3	35.3	45.5	53.9	68.6	72.3	77.6	90.8
Pipe	Suction Pipe	φ54	φ67	φ67	φ79	φ79	φ108	φ108	φ108	φ108	
	Discharge Pipe	φ22	φ28	φ28	φ35	φ35	φ42	φ42	φ42	φ42	
Overall Dimension	L(mm)	2950	2950	2950	2950	2950	2950	2950	2950	2950	
	W(mm)	1250	1250	1250	1250	1250	1250	1250	1250	1250	
	H(mm)	1850	1850	1850	1850	1850	1850	1850	1850	1850	

Remarks: The test condition for the capacity and input at the condensing temperature 40°C

#### 4.2.3 4 compressor units of air cooled middle & high temperature

Model		BBS4-									
		40MD	60MD	80MD	100MD	120MD	140MD	160MD	180MD	200MD	
Temperature(°C)		0°C~-25°C									
Refrigerant		R22									
Power Supply		380V/50Hz									
Compressor	Type	Semi-hermetic piston compressor									
	Model	K1000CC	K1500CC	K2000CC	K2500CC	K3000CC	Y3560CC	Y4060CC	Y4560CC	Y5060CC	
	Qty	4	4	4	4	4	4	4	4	4	
Condenser	Type	Shell & tube									
	Water flow(m <sup>3</sup> /h)	30	40	45	60	70	90	100	110	120	
	Pipe	2-1/2"	3"	3"	4"	4"	5"	6"	6"	6"	
Capacity & Input	Eavp 0°C	Capacity	123600	150200	185720	232800	266800	351320	400600	428640	468360
		Input (W)	35.4	43.2	52.2	67.6	81.2	102.9	109.7	119.2	133.8
	Eavp -5°C	Capacity	102120	125240	154840	194000	222000	290880	332200	351880	387120
		Input (W)	33.7	41.6	50.0	64.4	76.8	97.6	103.2	111.6	128.2
	Eavp -10°C	Capacity	83440	103560	128000	160200	183200	238280	272880	285280	316640
		Input (W)	31.7	39.1	47.1	60.6	71.8	91.5	96.4	103.4	120.8
Pipe	Suction Pipe (mm)	φ54	φ79	φ79	φ79	φ108	φ108	φ140	φ140	φ140	
	Discharge Pipe (mm)	φ28	φ28	φ35	φ35	φ42	φ42	φ42	φ42	φ42	
Overall Dimension	L(mm)	3600	3600	3600	3600	3600	3600	3600	3600	3600	
	W(mm)	1250	1250	1250	1250	1250	1250	1250	1250	1250	
	H(mm)	1850	1850	1850	1850	1850	1850	1850	1850	1850	

Remarks: The test condition for the capacity and input at the condensing temperature 40°C

#### 4.2.4 5 compressor units of air cooled middle & high temperature

Model		BBS5-									
		50MD	75MD	100MD	125MD	150MD	175MD	200MD	225MD	250MD	
Temperature(°C)		0°C~-25°C									
Refrigerant		R22									
Power Supply		380V/50Hz									
Compressor	Type	Semi-hermetic piston compressor									
	Model	K1000CC	K1500CC	K2000CC	K2500CC	K3000CC	Y3560CC	Y4060CC	Y4560CC	Y5060CC	
	Qty	5	5	5	5	5	5	5	5	5	
Condenser	Type	Shell & tube									
	Water flow(m <sup>3</sup> /h)	40	48	60	75	85	110	125	135	150	
	Pipe	2-1/2"	3"	4"	4"	5"	6"	6"	6"	6"	
Capacity & Input	Eavp 0°C	Capacity	154500	187750	232150	291000	333500	439150	500750	535800	585450
		Input (W)	44.3	54.0	65.3	84.5	101.6	128.6	137.15	149.0	167.3
	Eavp -5°C	Capacity	127650	156550	193550	242500	277500	363600	415250	439850	483900
		Input (W)	42.1	52.0	62.5	80.5	96.1	122.1	129.0	139.5	160.2
	Eavp -10°C	Capacity	104300	129450	160000	200250	229000	297850	341100	356600	395800
		Input (W)	39.7	48.9	58.9	75.8	89.8	114.4	120.5	129.3	151.0
Pipe	Suction Pipe (mm)	φ79	φ79	φ79	φ108	φ140	φ140	φ140	φ140	φ140	
	Discharge Pipe (mm)	φ28	φ35	φ35	φ42	φ42	φ42	φ42	φ54	φ54	
Overall Dimension	L(mm)	4250	4250	4250	4250	4250	4250	4250	4250	4250	
	W(mm)	1250	1250	1250	1250	1250	1250	1250	1250	1250	
	H(mm)	1850	1850	1850	1850	1850	1850	1850	1850	1850	

Remarks: The test condition for the capacity and input at the condensing temperature 40°C

#### 4.2.5 Double compressor units of air cooled middle & low temperature

Model		BBS2-							
		20LD	30LD	50LD	60LD	70LD	80LD	90LD	
Temperature(°C)		-20°C~-40°C							
Refrigerant		R22							
Power Supply		380V/50Hz							
Compressor	Type	Semi-hermetic piston compressor							
	Model	K1000CS	K1500CS	K2500CB	Y3060CB	Y3560CB	Y4060CB	Y4560CB	
	Qty	2	2	2	2	2	2	2	
Condenser	Type	Shell & tube							
	Water flow(m <sup>3</sup> /h)	10	12	18	23	28	30	32	
	Pipe	2"	2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	2-1/2"	
Capacity & Input	Eavp -20°C	Capacity (W)	34120	41760	62300	77000	90340	97940	106000
		Input (W)	17.6	20.0	30.4	41.8	49.4	51.6	53.2
	Eavp -25°C	Capacity (W)	26600	32500	48700	60000	70040	76200	83600
		Input (W)	15.4	18.0	27.8	37.8	44.0	45.6	47.6
	Eavp -30°C	Capacity (W)	20220	24700	37140	45680	52920	58000	64400
		Input (W)	13.2	15.8	25.0	33.2	38.4	39.8	42.0
Pipe	Suction Pipe (mm)	φ54	φ54	φ79	φ79	φ79	φ79	φ79	
	Discharge Pipe (mm)	φ22	φ22	φ28	φ28	φ28	φ28	φ28	
Overall Dimension	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	

Remarks: 1. Test condition: condensing temperature at 40°C. 2. DTC spray system is necessary at low temperature condition, see detailed specification of compressor.

#### 4.2.6 Triple compressor units of air cooled middle & low temperature

Model		BBS3-							
		30LD	45LD	75LD	90LD	105LD	120LD	135LD	
Temperature(°C)		-20°C~-40°C							
Refrigerant		R22							
Power Supply		380V/50Hz							
Compressor	Type	Semi-hermetic piston compressor							
	Model	K1000CS	K1500CS	K2500CB	Y3060CB	Y3560CB	Y4060CB	Y4560CB	
	Qty	3	3	3	3	3	3	3	
Condenser	Type	Shell & tube							
	Water flow(m <sup>3</sup> /h)	15	18	28	35	42	45	48	
	Pipe	2"	2"	2-1/2"	2-1/2"	3"	3"	3"	
Capacity & Input	Eavp -20°C	Capacity (W)	51180	62640	93450	115500	135510	146910	159000
		Input (W)	26.4	30.0	45.6	62.7	74.1	77.4	79.8
	Eavp -25°C	Capacity (W)	39900	48750	73050	90000	105060	114300	125400
		Input (W)	23.1	27.0	41.7	56.7	66.0	68.4	71.4
	Eavp -30°C	Capacity (W)	30330	37050	55710	68520	79380	87000	96600
		Input (W)	19.8	23.7	37.5	49.8	57.6	59.7	63.0
Pipe	Suction Pipe (mm)	φ54	φ54	φ79	φ108	φ108	φ108	φ108	
	Discharge Pipe (mm)	φ22	φ22	φ28	φ35	φ35	φ35	φ35	
Overall Dimension	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	

Remarks: 1. Test condition: condensing temperature at 40°C. 2. DTC spray system is necessary at low temperature condition, see detailed specification of compressor.

#### 4.2.7 4 compressor units of air cooled middle & low temperature

Model		BBS4-							
		40LD	60LD	100LD	120LD	140LD	160LD	180LD	
Temperature(°C)		-20°C~-40°C							
Refrigerant		R22							
Power Supply		380V/50Hz							
Compressor	Type	Semi-hermetic piston compressor							
	Model	K1000CS	K1500CS	K2500CB	Y3060CB	Y3560CB	Y4060CB	Y4560CB	
	Qty	4	4	4	4	4	4	4	
Condenser	Type	Shell & tube							
	Water flow(m <sup>3</sup> /h)	20	24	36	47	55	60	65	
	Pipe	2-1/2"	2-1/2"	2-1/2"	3"	4"	4"	4"	
Capacity & Input	Eavp -20°C	Capacity (W)	68240	83520	124600	154000	180680	195880	212000
		Input (W)	35.2	40.0	60.8	83.6	98.8	103.2	106.4
	Eavp -25°C	Capacity (W)	53200	65000	97400	120000	140080	152400	167200
		Input (W)	30.8	36.0	55.6	75.6	88.0	91.2	95.2
	Eavp -30°C	Capacity (W)	40440	49400	74280	91360	105840	116000	128800
		Input (W)	26.4	31.6	50.0	66.4	76.8	79.6	84.0
Pipe	Suction Pipe (mm)	φ79	φ79	φ79	φ108	φ108	φ108	φ108	
	Discharge Pipe (mm)	φ22	φ28	φ28	φ35	φ35	φ35	φ35	
Overall Dimension	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	

Remarks: 1. Test condition: condensing temperature at 40°C. 2. DTC spray system is necessary at low temperature condition, see detailed specification of compressor.

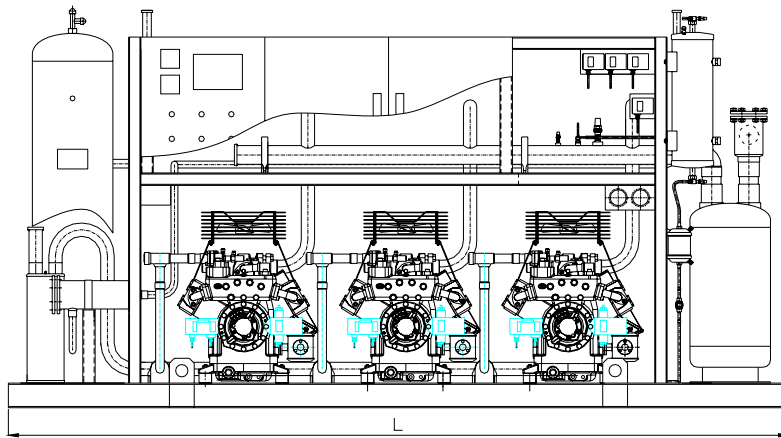
#### 4.2.8 5 compressor units of air cooled middle & low temperature

Model		BBF5-							
		50LD	75LD	125LD	150LD	175LD	200LD	225LD	
Temperature(°C)		-20°C~-40°C							
Refrigerant		R22							
Power Supply		380V/50Hz							
Compressor	Type	Semi-hermetic piston compressor							
	Model	K1000CS	K1500CS	K2500CB	Y3060CB	Y3560CB	Y4060CB	Y4560CB	
	Qty	5	5	5	5	5	5	5	
Condenser	Type	Shell & tube							
	Water flow(m <sup>3</sup> /h)	25	30	46	60	70	75	80	
	Pipe	2-1/2"	2-1/2"	3"	4"	4"	5"	5"	
Capacity & Input	Eavp -20°C	Capacity (W)	85300	104400	155750	192500	225850	244850	265000
		Input (W)	44.0	50.0	76.0	104.5	123.5	129.0	133.0
	Eavp -25°C	Capacity (W)	66500	81250	121750	150000	175100	190500	209000
		Input (W)	38.5	45.0	69.5	94.5	110.0	114.0	119.0
	Eavp -30°C	Capacity (W)	50550	61750	92850	114200	132300	145000	161000
		Input (W)	33.0	39.5	62.5	83.0	96.0	99.5	105.0
Pipe	Suction Pipe (mm)	φ79	φ79	φ108	φ108	φ108	φ108	φ108	
	Discharge Pipe (mm)	φ28	φ28	φ35	φ35	φ35	φ42	φ42	
Overall Dimension	L(mm)	4250	4250	4250	4250	4250	4250	4250	
	W(mm)	1250	1250	1250	1250	1250	1250	1250	
	H(mm)	1850	1850	1850	1850	1850	1850	1850	

Remarks: 1. Test condition: condensing temperature at 40°C. 2. DTC spray system is necessary at low temperature condition, see detailed specification of compressor.

## 5. Overall viewing

### 5.1 Air cooled paralleled units



### 5.2 Water cooled paralleled units

