



# FREEDOM

## INVERTER | B SERIES



**INVERTER**  
TECHNOLOGY

**R-410A**  
REFRIGERANT



**AHRI CERTIFIED**



### FLOOR CEILING

- » Wired Controller
- » Build-in Pump
- » Central Controller
- » Digital Display
- » Long Distance Alarm
- » Anti-Cold Wind Switch
- » ON/OFF Controller
- » Emergency Using
- » Blue anti-corrosion treatment

**R-410A**  
REFRIGERANT



Indoor		Outdoor		CF43BX018-M3N1H	CF43BX024-M3N1H	CF43BX036-M3N1H	CF43BX048-M3N1H	CF43BX060-M3N1H	
Power supply (Indoor)	V-Ph-Hz			208-230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	
Power supply (Outdoor)	V-Ph-Hz			208-230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	
Cooling	Capacity (range)	Btu/h		18000(~/)	24000(~/)	36000(~/)	48000(~/)	54000(27000-54000)	
	Input	W		1440	1920	4509	5161	5500	
	Rated current	A		6.6	8.78	20.6	23.6	24.21	
	EER	Btu/w		12.5	12.5	8	9.3	9.8	
Heating	SEER	Btu/w		20	20	16	17.8	18.0	
	Capacity (range)	Btu/h		18000(~/)	24000(~/)	38000(~/)	50000(~/)	60000(24000-62000)	
	Input	W		1636	1846	3978	4579	5560	
	Rated current	A		7.49	8.44	18.2	20.96	24.38	
Heating at 17F (-8.33°C)	COP	W/W		3.22	3.81	2.80	3.20	3.16	
	HSPF4	Btu/w		10.5	11	10	11	10.5	
	HSPF5	Btu/w		8.8	9	8.7	9.4	9.1	
	Rated capacity	Btu/h		/	/	/	/	35000	
Heating at 5F (-15°C)	Rated capacity	Btu/h		10533	17705	22298	34601	34000	
	COP	W/W		/	/	/	/	2.0	
Heating at -4F (-20°C)	Rated capacity	Btu/h		/	/	/	/	28500	
Heating at -13F (-25°C)	Rated capacity	Btu/h		/	/	/	/	21000	
Heating at -22F (-30°C)	Rated capacity	Btu/h		/	/	/	/	17000	
MINIMUM CIRCUIT AMPACITY(Indoor)	A			1.9	2.5	1.9	2.3	3.0	
MAX.FUSE(Indoor)	A			15	15.0	15.0	15.0	15	
Indoor fan motor	Model			ZKFN-55-8-1	ZKFN-55-8-1	ZKFN-115-8-1	ZKFN-90-8-1	ZKFN-160-8-1-2	
	Qty								
	Input	W		100.0	100.0	130.0	96.0	90.0	
	RLA	A		1.5	/	/	/	2.4	
Winding Resistance	Ω			-	-	-	-	17.8	
	Speed(Hi/Mi/Lo)	r/min		950/850/750	1350/1260/1120	1300/1150/800	1320/1200/1120	1350/1050/850	
Indoor air flow (Hi/Mi/Lo)	m <sup>3</sup> /h			932/825/715	1290/1204/1017	1762/1559/1084	2300/1900/1700	2353/1749/1352	
Indoor air flow (Hi/Mi/Lo)	CFM			548.24/485.29/420.59	758.82/708.24/598.24	1036.47/917.06/637.65	1362.94/1117.65/1000.00	1384.12/1028.82/795.29	
Indoor noise level (Hi/Mi/Lo)	dB(A)			44.5/41.5/36.5	50/47/39.5	51.5/0/40.5	55.5/51.5/46.5	55/50/39	
	Dimension(W*D*H)	mm		1068x675x235	1068x675x235	1285x675x235	1650x675x235	1650x675x235	
Indoor unit	Dimension(W*D*H)	inch		42.05x26.57x9.25	42.05x26.57x9.25	50.59x26.57x9.25	64.96x26.57x9.25	64.96x26.57x9.25	
	Packing (W*D*H)	mm		1145x755x318	1145x755x318	1360x755x318	1725x755x318	1725x755x318	
	Packing (W*D*H)	inch		45.08x29.72x12.32	45.08x29.72x12.32	53.54x29.72x12.32	67.91x29.72x12.32	67.91x29.72x12.32	
	Net/Gross weight	Kg		25.9/31	26.5/31.4	31.3/37	39.8/46.4	46.50	
	Net/Gross weight	lbs.		57.10/68.34	58.42/69.22	69.00/81.57	87.74/102.29	101.41/110.23	
	Drainage water pipe dia	mm			ODΦ25mm	ODΦ25mm	ODΦ25mm	ODΦ25mm	
	Qty/per 20' /40' /40'HQ	Indoor unit			102/220/252	102/220/252	92/188/213	72/147/167	72/147/167
	MINIMUM CIRCUIT AMPACITY(Outdoor)	A			15.0	18	35	35	0
	MAX.FUSE(Outdoor)	A			20	25	50	50	/
	Compressor	Model			ASM135D23UFZ	ATF235D22UMT	ATF310D43UMT	ATQ420D1UMJ	ATQ420D1UMJ
Type				ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	
Brand				GMCC	GMCC	GMCC	GMCC	GMCC	
Capacity		W		4055	7135	9490	13100	13100	
Input		W		1035	1970	2600	3420	3420	
Rated current(RLA)		A		10	12	/	23.5	0	
Thermal protector position			NA	NA	NA	NA	NA		
Refrigerant oil/oil charge	ml			VG74/450	VG74/670	VG74/1000	VG74/1400	VG74/1400	
Outdoor fan motor	Model			ZKFN-50-8-2	ZKFN-120-8-2	ZKFN-120-8-2	ZKFN-85-8-22-5	ZKFN-85-8-22-5	
	Input	W		115.0	150.0	150.0	128.0	126.0	
	RLA	A		0.6	0.6	/	1.2	0	
	Speed	r/min		850/750/700	850/750/700	950/750	800/700/600	900/800	
Outdoor air flow	m <sup>3</sup> /h			2500	3800	2529	7500	7500	
Outdoor air flow	CFM			1470.59	2235.29	1487.65	4500.00	4411.76	
Outdoor noise level	dB(A)			57.5	58.5	62.5	61.5	65	
	Dimension(W*D*H)	mm		845x383x702	946x410x810	946x410x810	952x415x1333	952x415x1333	
Outdoor unit	Dimension(W*D*H)	inch		33.27x14.29x27.64	37.24x16.14x31.89	37.24x16.14x31.89	37.48x16.34x52.48	37.48x16.34x52.48	
	Packing (W*D*H)	mm		965x395x775	1090x500x885	1090x500x885	1095x495x1480	1095x495x1480	
	Packing (W*D*H)	inch		37.99x15.55x30.12	42.91x19.69x34.45	42.91x19.69x34.45	43.11x19.49x58.27	43.11x19.49x58.27	
	Net/Gross weight	Kg		47.7/51	64/69	67.4/73	101/115	102.1/115.4	
	Net/Gross weight	lbs.		105.16/112.43	141.09/152.12	148.59/160.94	222.66/253.53	225.09/254.41	
	Refrigerant type	oz			R410A/68.8	R410A/82.9	R410A/108	R410A/148	R410A/163
Refrigerant precharge	ft			20	20	30	30	30	
Additional charge for each ft	oz			0.21	0.21	0.32	0.32	0.32	
Design pressure	PSIG			550/340	550/340	550/340	550/340	550/340	
Refrigerant piping	Liquid side/ Gas side	mm(inch)		6.35mm(1/4in)/12.7mm(1/2in)	9.52mm(3/8in)/15.9mm(5/8in)	9.52mm(3/8in)/15.9mm(5/8in)	9.52mm(3/8in)/15.9mm(5/8in)	9.52mm(3/8in)/19mm(3/4in)	
	Max. refrigerant pipe length	ft		30	50	65	50	65	
	Max. refrigerant pipe length	m		98.42	164.04	213.25	164.04	213.25	
	Max. difference in level	m		20	25	30	30	30	
Room temperature	Max. difference in level	ft		65.62	82.02	98.42	98.42	98.42	
	Indoor(cooling/heating)	°C		17~32.0~30	17~32.0~30	17~32.0~30	17~32.0~30	17~32.0~30	
Application area (Cooling Standard)	Outdoor(cooling/heating)	°C		-25~50/-25~30	-25~50/-25~30	-25~50/-25~30	-25~50/-25~30	-25~50/-25~30	
	Application area (cooling standard)	m <sup>2</sup>		24~35	32~47	48~70	64~94	72~106	
Application area (cooling standard)	sq.ft			258.33~376.74	344.44~505.90	516.67~753.47	688.89~1011.81	775.00~1140.97	
	Qty/per 20' /40' /40'HQ	Outdoor unit			102/215/216	44/96/138	44/96/138	22/48/48	



### CASSETTE

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REFRIGERANT



Indoor		CK43BX009-C3N1H	CK43BX012-C3N1H	CK43BX018-C3N1H	CK43BX024-C3N1H	CK43BX036-C3N1H	CK43BX048-C3N1H	
Outdoor		CM43BX009-H3N1H	CM43BX012-H3N1H	CM43BX018-H3N1H	CM43BX024-H3N1H	CM43BX036-H3N1H	CM43BX048-H3N1H	
Power supply (Indoor)	V- Ph-Hz	208-230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	
Power supply (Outdoor)	V- Ph-Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	
Cooling	Capacity (range)	9000(-/-)	12000(-/-)	18000(-/-)	24000(-/-)	36000(-/-)	48000(-/-)	
	Input	692	858	1440	1920	4000	5053	
	Rated current	A	3.17	3.9	6.59	16.7	23.1	
	EER	Btu/w	13	14	12.5	12.5	9.0	9.5
	SEER	Btu/w	20	21.5	20	20	17.5	16.8
Heating	Capacity (range)	10000(-/-)	12000(-/-)	18000(-/-)	24400(-/-)	38000(-/-)	50000(-/-)	
	Input	910	951	1636	2218	3700	4727	
	Rated current	A	4	4.2	7.49	10.18	16.93	21.6
	COP	W/W	3.22	3.7	3.22	3.22	3.01	3.10
	HSPF4	Btu/w	10.5	10.5	10.3	10.5	10.5	11
HSPF5	Btu/w	8.4	8.4	8.8	8.4	9.1	9.4	
Heating at 5F (-15°C)	Rated capacity	Btu/h	7878	8462	9410	15471	28000	35410
MINIMUM CIRCUIT AMPACITY(Indoor)	A	1.2	/	/	2.5	1.9	2	
MAX.FUSE(Indoor)	A	15.0	/	/	15	15	15.0	
Indoor fan motor	Model	ZKFP-46-8-1	ZKFP-46-8-1	/	ZKFP-42-8-1	ZKFP-124-8-2	ZKFN-170-8-1	
	Input	W	45.0	45.0	58.0	141.0	232.0	
	RLA	A	/	/	0.332	0.93	/	
	Speed(Hi/M/Lo)	r/min	600/520/460	/	/	600/520/450	720/630/560	950/900/800/700
Indoor air flow (Hi/M/Lo)	m3/h	600/520/460	////	////	1162/1042/918	1861/1628/1447	2000/1750/1450	
Indoor air flow (Hi/M/Lo)	CFM	352.94/305.88/270.59	////	////	683.53/612.94/540.00	1094.71/957.65/851.18	1176.47/1029.41/852.94	
Indoor noise level (Hi/M/Lo)	dB(A)	38.5/34.5/30.5	41/38.5/33.5	41/38.5/33.5	48.5/46.5/40.5	52.5//46.5	54.5/51.5/46.5	
Indoor unit	Dimension(W*D*H)	mm	570x570x260	570x570x260	840x840x205	840x840x245	840x840x287	
	Dimension(W*D*H)	inch	22.44x22.44x10.24	22.44x22.44x10.24	33.07x33.07x8.07	33.07x33.07x9.65	33.07x33.07x11.30	
	Packing (W*D*H)	mm	662x662x317	662x662x317	900x900x225	900x900x265	900x900x307	
	Packing (W*D*H)	inch	26.06x26.06x12.48	26.06x26.06x12.48	35.43x35.43x8.86	35.43x35.43x10.43	35.43x35.43x11.50	
	Net/Gross weight	Kg	14.5/17.3	16/18.6	21/24.6	26.4/30	28.7/32.9	
	Net/Gross weight	lbs.	31.97/38.14	35.27/41.01	46.30/54.23	58.20/66.14	63.27/72.53	
Drainage water pipe dia	mm	ODφ25mm	ODφ25mm	ODφ32mm	ODφ32mm	ODφ32mm		
Qty'per 20' /40' /40'HQ	Indoor unit	186/375/429	186/375/429	////	////	100/212/238	100/212/238	
MINIMUM CIRCUIT AMPACITY(Outdoor)	A	10	12	18	35	35	35	
MAX.FUSE(Outdoor)	A	15	15	25	50	50	50	
Compressor	Model	ASN98D22UFZ	ASM98D32UFZ	/	ATF235D22UMT	ATF310D43UMT	ATQ420D1UMJ	
	Type	ROTARY	ROTARY	/	ROTARY	ROTARY	ROTARY	
	Brand	GMCC	GMCC	/	GMCC	GMCC	GMCC	
	Capacity	W	2935	2958	7135	9490	13100	
	Input	W	748	730	1970	2600	3420	
	Rated current(RLA)	A	5.5	6.8	12	/	23.5	
Refrigerant oil/oil charge	ml	VG74/370	VG74/340	/	VG74/670	VG74/1000	VG74/1400	
Outdoor fan motor	Model	ZKFN-34-8-1-3	ZKFN-34-8-1-3	/	ZKFN-120-8-2	ZKFN-120-8-2	ZKFN-85-8-22-5	
	Input	W	/	/	150.0	150.0	126.0	
	RLA	A	0.4	0.4	0.6	/	1.2	
	Speed	r/min	800/750/650	800/700/650	/	850/750/700	950/750	800/700/600
Outdoor air flow	m3/h	2000	2000	/	3800	2529	7650	
Outdoor air flow	CFM	1176.47	1176.47	/	2235.29	1487.65	4500.00	
Outdoor noise level	dB(A)	52	55	57.5	58.5	63.5	61.5	
Outdoor unit	Dimension(W*D*H)	mm	770x300x555	800x333x554	xx	946x410x810	952x415x1333	
	Dimension(W*D*H)	inch	30.31x11.81x21.85	31.50x13.11x21.81	xx	37.24x16.14x31.89	37.48x16.34x52.48	
	Packing (W*D*H)	mm	900x345x595	920x390x625	xx	1090x500x885	1095x495x1480	
	Packing (W*D*H)	inch	35.43x13.58x23.43	36.22x15.35x24.61	xx	42.91x19.69x34.45	43.11x19.49x58.27	
	Net/Gross weight	Kg	30.5/32.5	36.5/39.1	/	64/69	67.4/73	101/115
	Net/Gross weight	lbs.	67.24/71.65	80.47/86.20	/	141.09/152.12	148.59/160.94	222.66/253.53
Refrigerant type	oz	R410A/38.8	R410A/40.6	/	R410A/82.9	R410A/108	R410A/148	
Refrigerant precharge	ft	15	15	/	30	30	30	
Additional charge for each ft	oz	0.16	0.16	/	0.21	0.32	0.32	
Design pressure	PSIG	550/340	550/340	550/340	550/340	550/340	550/340	
Refrigerant piping	Liquid side/ Gas side	mm (inch)	6.35mm(1/4in)/9.52mm(3/8in)	6.35mm(1/4in)/12.7mm(1/2in)	5.35mm(1/4in)/12.7mm(1/2in)	9.52mm(3/8in)/15.9mm(5/8in)	9.52mm(3/8in)/15.9mm(5/8in)	9.52mm(3/8in)/15.9mm(5/8in)
	Max. refrigerant pipe length	m	25	25	30	50	65	
	Max. refrigerant pipe length	ft	82.02	82.02	98.42	164.04	213.25	
	Max. difference in level	m	10	10	20	25	30	
	Max. difference in level	ft	32.81	32.81	65.62	82.02	98.42	
	Max. difference in level	°C	/	/	/	/	/	
Room temperature	Indoor(cooling/ heating)	°C	17~32/0~30	17~32/0~30	17~32/0~30	17~32/0~30	17~32/0~30	
	Outdoor(cooling/heating)	°C	-25~50/-25~30	-25~50/-25~30	-25~50/-25~30	-25~50/-25~30	-25~50/-25~30	
Application area (Cooling Standard)	m <sup>2</sup>	12~18	16~23	24~35	32~47	48~70	64~94	
Application area (cooling standard)	sq.ft	129.17~193.75	172.22~247.57	258.33~376.74	344.44~505.90	516.67~753.47	688.89~1011.81	
Qty'per 20' /40' /40'HQ	Outdoor unit	166/344/344	108/219/292	//	44/96/138	44/96/138	22/48/48	

### FAN COIL



- » Wired Controller
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Indoor		CC43BX009-E3N1H	CC43BX012-E3N1H	CC43BX018-E3N1H	CC43BX024-E3N1H	CC43BX036-E3N1H	CC43BX048-E3N1H	CC43BX060-E3N1H
Outdoor		CM43BX009-H3N1H	CM43BX012-H3N1H	CM43BX018-H3N1H	CM43BX024-H3N1H	CM43BX036-H3N1H	CM43BX048-H3N1H	CM43BX060-H3N1H
Power supply (Indoor)	V- Ph-Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz
Power supply (Outdoor)	V- Ph-Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz
Cooling	Capacity (range)	Btu/h 9000(3000~11300)	12000(4100~12100)	18000(6400~18800)	24000(11000~24400)	36000(14000~38000)	48000(~/)	57000(~/)
	Input	W 667	960	1440	1920	4000	5217	5700
	Rated current	A 3.05	4.4	6.6	8.8	18.3	23.14	25.0
	EER	Btu/w 13.5	12.5	12.5	12.5	9	9.2	10
	SEER	Btu/w 20.5	21.5	19	21.5	16.5	17.4	18
Heating	Capacity (range)	Btu/h 10000(4800~13900)	12000(3600~12100)	18000(6000~18900)	24400(10200~29400)	40000(14000~42000)	49500(~/)	60000(~/)
	Input	W 809	1072	1680	2030	3478	4125	5048
	Rated current	A 3.8	5.05	7.7	9.3	15.9	18.3	23.1
	COP	W/W 3.62	3.28	3.14	3.52	3.37	3.52	3.48
	HSPF4	Btu/w 11.5	11.5	10.5	11	10.3	10.3	9.0
HSPF5	Btu/w /	9	9	9.5	10	8.8	7.6	
Cooling at 5 F (-15°C)	Rated capacity	Btu/h /	13800	19800	26600	/	/	/
Heating at 17F (-8.33°C)	Rated capacity	Btu/h 8766	9000	13600	17100	/	/	/
Heating at 5F (-15°C)	Rated capacity	Btu/h 8344	8500	11800	17200	27303	36000	34905
	COP	W/W 2.08	1.98	2.05	2.03	/	/	/
Heating at -4F (-20°C)	Rated capacity	Btu/h 6177	6300	9600	14000	/	/	/
	Rated capacity	Btu/h 5631	5800	6800	12300	/	/	/
MINIMUM CIRCUIT AMPACITY(Indoor)	A 1.3	1.3	3	3.0	3.0	3.0	3.0	/
	A 15	15	15	15.0	15.0	15.0	15.0	/
MAX.FUSE(Indoor)	A 1.1	1.1	1.2	1.2	1.6	1.6	1.6	/
	A 15	15	15	15	15	15	15	15
Indoor fan motor	Model	ZKFN-55-8-22-1	ZKFN-55-8-22-1	ZKFN-160-8-1-2	ZKFN-160-8-1-2	ZKFN-300-8-1	ZKFN-560-8-1-1	ZKFN-700-8-1
	Input	W 130.0	130.0	90.0	90.0	250.0	560.0	420.0
Indoor air flow (Hi/Mi/Lo)	m³/h 600/480/300	600/480/300	600/480/300	900/765/630	1318.3/1178.2/739.3	1839.1/1551.1/1195	2088.3/1752.7/1214.9	3665.2/3062/2145
	CFM 352.94/282.35/176.47	352.94/282.35/176.47	352.94/282.35/176.47	529.41/450.00/370.59	776.47/693.06/434.88	1081.76/912.35/702.94	1228.41/1031.00/714.65	2158.88/1709.41/1261.76
Indoor noise level (Hi/Mi/Lo)	dB(A) 35.5/30.5/27.5	37.5/33/27.5	41.5/38.5/36	44.4/41/34	45.4/42/38.5	50.5/49.5/46	57.6/54/51	57.6/54/51
	dB(A) 35.5/30.5/27.5	37.5/33/27.5	41.5/38.5/36	44.4/41/34	45.4/42/38.5	50.5/49.5/46	57.6/54/51	57.6/54/51
Indoor unit	Dimension(W*D*H)	mm 700x506x200	700x506x200	880x674x210	1100x774x249	1360x774x249	1200x874x300	1400x858x440
	Dimension(W*D*H)	inch 27.56x19.92x7.87	27.56x19.92x7.87	34.65x26.54x8.27	43.31x30.47x9.80	53.54x30.47x9.80	47.24x34.41x11.81	55.12x33.78x17.32
	Packing (W*D*H)	mm 860x540x285	860x540x285	1070x725x280	1305x805x315	1570x805x315	1405x915x365	1605x910x515
	Packing (W*D*H)	inch 33.86x21.26x11.22	33.86x21.26x11.22	42.13x28.54x10.63	51.38x31.69x12.01	61.81x31.69x12.01	55.31x36.02x13.98	63.19x35.83x19.88
	Net/Gross weight	kg 17.7/21.9	17.8/22.2	23.8/29.5	39.4/46.7	48.3/55.5	54.3/64.3	74.86
	Net/Gross weight	lbs. 39.02/48.28	39.24/48.50	52.47/65.04	86.86/102.95	106.48/122.36	119.71/141.76	163.14/189.60
	Drainage water pipe dia	mm /	OD#25mm	OD#25mm	OD#25mm	OD#25mm	OD#25mm	OD#25mm
	Qty/per 20' /40' /40'HQ	Indoor unit 214/461/619	214/461/619	120/264/297	77/161/198	49/105/120	62/130/149	35/72/86
MINIMUM CIRCUIT AMPACITY(Outdoor)	A 10	10	12	15.0	15	35	35	0
	A 15	15	15	20	25	50	50	/
MAX.FUSE(Outdoor)	A 10	10	12	15.0	15	35	35	0
	A 15	15	15	20	25	50	50	/
Compressor	Model	ASH98D22UFZ	ASH98D32UFZ	ASM135D23UFZ	ATF235D22UMT	ATF310D43UMT	ATO420D1UMJ	ATO420D1UMJ
	Type	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY
	Brand	GMCC	GMCC	GMCC	GMCC	GMCC	GMCC	GMCC
	Capacity	W 2935	2958	4055	7135	9490	13100	13100
	Input	W 748	730	1035	1970	2600	3420	3420
	Rated current(FLA)	A 5.5	6.8	10	12	/	23.5	0
	Thermal protector position	NA	NA	NA	NA	NA	NA	NA
Outdoor fan motor	Model	ZKFN-34-8-1-3	ZKFN-34-8-1-3	ZKFN-50-8-2	ZKFN-120-8-2	ZKFN-120-8-2	ZKFN-85-8-2-2	ZKFN-85-8-2-2
	Input	W /	/	115.0	150.0	150.0	126.0	126.0
Outdoor air flow	CFM 1176.47	1176.47	1470.59	2235.29	1487.65	4500.00	4411.76	4411.76
	dB(A) 54.5	55	59	59	63.5	62.5	64	64
Outdoor unit	Dimension(W*D*H)	mm 770x300x555	800x333x554	845x363x702	946x410x810	946x410x810	952x415x1333	952x415x1333
	Dimension(W*D*H)	inch 30.31x11.81x21.85	31.50x13.11x21.81	33.27x14.29x27.64	37.24x16.14x31.89	37.24x16.14x31.89	37.48x16.34x52.48	37.48x16.34x52.48
	Packing (W*D*H)	mm 900x345x695	920x390x625	965x395x775	1090x500x885	1090x500x885	1095x495x1480	1095x495x1480
	Packing (W*D*H)	inch 35.43x13.58x23.43	36.22x15.35x24.61	37.99x15.55x30.12	42.91x19.69x34.45	42.91x19.69x34.45	43.11x19.49x58.27	43.11x19.49x58.27
	Net/Gross weight	kg 30.5/32.5	36.5/39.1	47.7/51	64.69	67.47	101/115	102.1/115.4
Refrigerant type	oz 67.24/71.65	80.47/86.20	105.16/112.43	141.09/152.12	148.59/160.94	222.66/253.53	225.09/254.41	
Refrigerant precharge	oz R410A/38.8	R410A/40.6	R410A/68.8	R410A/82.9	R410A/108	R410A/148	R410A/163	
Additional charge for each ft	oz 0.16	0.16	0.21	0.21	0.32	0.32	0.32	
Design pressure	PSIG 550/340	550/340	550/340	550/340	550/340	550/340	550/340	
Refrigerant piping	Liquid side/ Gas side	mm(inch) 6.35mm(1/4in)/9.52mm(3/8in)	6.35mm(1/4in)/12.7mm(1/2in)	6.35mm(1/4in)/12.7mm(1/2in)	9.52mm(3/8in)/15.9mm(5/8in)	9.52mm(3/8in)/15.9mm(5/8in)	9.52mm(3/8in)/15.9mm(5/8in)	9.52mm(3/8in)/19mm(3/4in)
	Max. refrigerant pipe length	m 25	25	30	50	65	65	65
	Max. refrigerant pipe length	ft 82.02	82.02	98.42	164.04	213.25	213.25	213.25
	Max. difference in level	m 10	10	20	25	30	30	30
	Max. difference in level	ft 32.81	32.81	65.62	82.02	98.42	98.42	98.42
Room temperature	Indoor(cooling/heating)	°C 17~32/0~30	17~32/0~30	17~32/0~30	17~32/0~30	17~32/0~30	17~32/0~30	17~32/0~30
	Outdoor(cooling/heating)	°C -25~-50/-25~30	-25~-50/-25~30	-25~-50/-25~30	-25~-50/-25~30	-25~-50/-25~30	-25~-50/-25~30	-25~-50/-25~30
Application area (Cooling Standard)	m² 12~18	16~23	24~35	32~47	48~70	76~111	76~111	
Application area (cooling standard)	sq.ft 129.17~193.75	172.22~247.57	258.33~376.74	344.44~505.90	516.67~753.47	828.89~1011.81	828.89~1011.81	
Qty/per 20' /40' /40'HQ	Outdoor unit 166/344/344	108/219/292	102/215/216	44/96/138	44/96/138	22/48/48	22/48/48	



### CONSOLE

- » Wired Controller
- » Central Controller
- » Long Distance Alarm
- » ON/OFF Controller
- » Blue anti-corrosion treatment
- » Build-in Pump
- » Digital Display
- » Anti-Cold Wind Switch
- » Emergency Using

**R-410A**  
REFRIGERANT



Indoor		Outdoor		CF43BX012-M3N1H	
Power supply (Indoor)			V- Ph-Hz	CM43BX012-H3N1H	
Power supply (Outdoor)			V- Ph-Hz	208-230V,1Ph, 60Hz	
Cooling	Capacity (range)		Btu/h	12000(/~/)	
	Input		W	923	
	Rated current		A	4.22	
	EER		Btu/w	13	
SEER			Btu/w	20.5	
	Heating	Capacity (range)		Btu/h	12000(/~/)
		Input		W	960
		Rated current		A	4.39
COP			W/W	3.66	
HSPF4			Btu/w	10	
	HSPF5		Btu/w	8	
		Heating at 5F (-15°C)		Rated capacity	Btu/h
MINIMUM CIRCUIT AMPACITY(Indoor)			A	1.3	
Indoor fan motor	Model			ZKFP-20-8-2-1	
	Speed(Hi/Mi/Lo)		r/min	810/780/680/530	
Indoor air flow (Hi/Mi/Lo)			m <sup>3</sup> /h	620/541/421	
Indoor air flow (Hi/Mi/Lo)			CFM	364.71/318.24/247.65	
Indoor noise level (Hi/Mi/Lo)			dB(A)	45//34.5	
Indoor unit	Dimension(W*D*H)		mm	700x600x210	
	Dimension(W*D*H)		inch	27.56x23.62x8.27	
	Packing (W*D*H)		mm	780x685x300	
	Packing (W*D*H)		inch	30.71x26.97x11.81	
	Net/Gross weight		Kg	14.8/18.6	
	Net/Gross weight		lbs.	32.63/41.01	
Drainage water pipe dia			mm	ODΦ16mm	
Qty'per 20' /40' /40'HQ			Indoor unit	168/343/392	
MINIMUM CIRCUIT AMPACITY(Outdoor)			A	12	
MAX.FUSE(Outdoor)			A	15	
Compressor	Model			ASM98D32UFZ	
	Type			ROTARY	
	Brand			GMCC	
	Capacity		W	2958	
	Input		W	730	
	Rated current(RLA)		A	6.8	
	Thermal protector position			NA	
	Capacitor		uF	0.0	
Refrigerant oil/oil charge		ml		VG74/340	
Outdoor fan motor	Model			ZKFN-34-8-1-3	
	RLA		A	0.4	
	Speed		r/min	800/700/650	
Outdoor air flow			m <sup>3</sup> /h	2000	
Outdoor air flow			CFM	1176.47	
Outdoor noise level			dB(A)	55.5	
Outdoor unit	Dimension(W*D*H)		mm	800x333x554	
	Dimension(W*D*H)		inch	31.50x13.11x21.81	
	Packing (W*D*H)		mm	920x390x625	
	Packing (W*D*H)		inch	36.22x15.35x24.61	
	Net/Gross weight		Kg	36.5/39.1	
	Net/Gross weight		lbs.	80.47/86.20	
Refrigerant type			oz	R410A/40.6	
Refrigerant precharge			ft	15	
Additional charge for each ft			oz	0.16	
Design pressure			PSIG	550/340	
Refrigerant piping	Liquid side/ Gas side		mm(inch)	6.35mm(1/4in)/12.7mm(1/2in)	
	Max. refrigerant pipe length		m	25	
	Max. refrigerant pipe length		ft	82.02	
	Max. difference in level		m	10	
	Max. difference in level		ft	32.81	
Room temperature	Indoor(cooling/ heating)		°C	17~32/0~30	
	Outdoor(cooling/heating)			-25~50/-25~30	
Application area (Cooling Standard)			m <sup>2</sup>	16~23	
Application area (cooling standard)			sq.ft	172.22~247.57	
Qty'per 20' /40' /40'HQ			Outdoor unit	108/219/292	



**R-410A**  
REFRIGERANT



## OUTDOOR UNITS

- » Wired Controller
- » Central Controller
- » Long Distance Alarm
- » ON/OFF Controller
- » Blue anti-corrosion treatment
- » Build-in Pump
- » Digital Display
- » Anti-Cold Wind Switche
- » Emergency Using

Outdoor Unit Model Number		CM43BX009-H3N1H	CM43BX012-H3N1H	CM43BX018-H3N1H	CM43BX024-H3N1H	CM43BX036-H3N1H	CM43BX048-H3N1H	CM43BX060-H3N1H	
System type				Heat pump					
Power supply	V- Ph-Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208-230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	208/230V,1Ph, 60Hz	
MINIMUM CIRCUIT AMPACITY(Outdoor)	A	15.0	18	35	35	0			
MINIMUM CIRCUIT AMPACITY(Outdoor)	A	20	25	50	50	/			
Compressor	Model	ASN98D22UFZ	ASM98D32UFZ	ASM135D23UFZ	ATF235D22UMT	ATF310D43UMT	ATQ420D1UMU	ATQ420D1UMU	
	Type	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	ROTARY	
	Brand	GMCC	GMCC	GMCC	GMCC	GMCC	GMCC	GMCC	
	Capacity	W	2935	2958	4055	7135	9490	13100	13100
	Input	W	748	730	1035	1970	2600	3420	3420
	Rated current(RLA)	A	5.5	6.8	10	12	/	23.5	0
	Thermal protector position		NA	NA	NA	NA	NA	NA	NA
	Capacitor	uF	/	0.0	/	/	/	/	/
	Refrigerant oil/oil charge	ml	VG74/370	VG74/340	VG74/450	VG74/670	VG74/1000	VG74/1400	VG74/1400
Outdoor fan motor	Model	ZKFN-34-8-1-3	ZKFN-34-8-1-3	ZKFN-50-8-2	ZKFN-120-8-2	ZKFN-120-8-2	ZKFN-85-8-22-5	ZKFN-85-8-22-5	
	Input	W	/	115.0	150.0	150.0	126.0	126.0	
	RLA	A	0.4	0.4	0.6	0.6	/	1.2	
	Speed	r/min	800/750/650	800/700/650	850/750/700	850/750/700	950/750	800/700/600	900/800
Outdoor air flow	m <sup>3</sup> /h	2000	2000	2500	3800	2529	7650	7500	
Outdoor air flow	CFM	1176.47	1176.47	1470.59	2235.29	1487.65	4500.00	4411.76	
Outdoor noise level	dB(A)	54.5	55	59	59	63.5	62.5	64	
Outdoor unit	Dimension(W*D*H)	mm	770x300x555	800x333x554	845x363x702	946x410x810	946x410x810	952x415x1333	952x415x1333
	Dimension(W*D*H)	inch	30.31x11.81x21.85	31.50x13.11x21.81	33.27x14.29x27.64	37.24x16.14x31.89	37.24x16.14x31.89	37.48x16.34x52.48	37.48x16.34x52.48
	Packing (W*D*H)	mm	900x345x595	920x390x625	965x395x775	1090x500x885	1090x500x885	1095x495x1480	1095x495x1480
	Packing (W*D*H)	inch	35.43x13.58x23.43	36.22x15.35x24.61	37.99x15.55x30.12	42.91x19.69x34.45	42.91x19.69x34.45	43.11x19.49x58.27	43.11x19.49x58.27
	Net/Gross weight	Kg	30.5/32.5	36.5/39.1	47.7/51	64/69	67.4/73	101/115	102.1/115.4
	Net/Gross weight	lbs.	67.24/71.65	80.47/86.20	105.16/112.43	141.09/152.12	148.59/160.94	222.66/253.53	225.09/254.41
Refrigerant type	oz	R410A/38.8	R410A/40.6	R410A/68.8	R410A/82.9	R410A/108	R410A/148	R410A/163	
Refrigerant precharge	ft	15	15	20	20	30	30	30	
Additional charge for each ft	oz	0.16	0.16	0.21	0.21	0.32	0.32	0.32	
Design pressure	PSIG	550/340	550/340	550/340	550/340	550/340	550/340	550/340	
Refrigerant piping	Liquid side/ Gas side	mm(inch)	6.35mm(1/4in) /9.52mm(3/8in)	6.35mm(1/4in) / 12.7mm(1/2in)	6.35mm(1/4in) /12.7mm(1/2in)	9.52mm(3/8in) /15.9mm(5/8in)	9.52mm(3/8in) /15.9mm(5/8in)	9.52mm(3/8in) /15.9mm(5/8in)	9.52mm(3/8in) /19mm(3/4in)
	Max refrigerant pipe length	m	25	25	30	50	65	65	65
	Max refrigerant pipe length	ft	82.02	82.02	98.42	164.04	213.25	213.25	213.25
	Max difference in level	m	10	10	20	25	30	30	30
	Max difference in level	ft	32.81	32.81	65.62	82.02	98.42	98.42	98.42
Room temperature	Indoor(cooling/heating)	°C	17~32/0~30	17~32/0~30	17~32/0~30	17~32/0~30	17~32/0~30	17~32/0~30	17~32/0~30
	Outdoor(cooling/heating)	°C	-25~50/-25~30	-25~50/-25~30	-25~50/-25~30	-25~50/-25~30	-25~50/-25~30	-25~50/-25~30	-25~50/-25~30
Application area (Cooling Standard)	m <sup>2</sup>	12~18	16~23	24~35	32~47	48~70	64~94	76~111	
Application area (cooling standard)	sq.ft	129.17~193.75	172.22~247.57	258.33~376.74	344.44~505.90	516.67~753.47	688.89~1011.81	818.06~1194.79	
Qty per 20' /40' /40'HQ	Outdoor unit	166/344/344	108/219/292	102/215/216	44/96/138	44/96/138	22/48/48	22/48/48	



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