

# Copeland Scroll™ Indoor Refrigeration Units for Refrigeration

Copeland™ air-cooled refrigeration units for medium temperature and low temperature applications.

Copeland Scroll refrigeration units are equipped with the latest refrigeration scroll compressors and build the widest range of its kind. The modular line concept offers base units which can be adapted to the target application by various options including weather housings and fan speed controls.

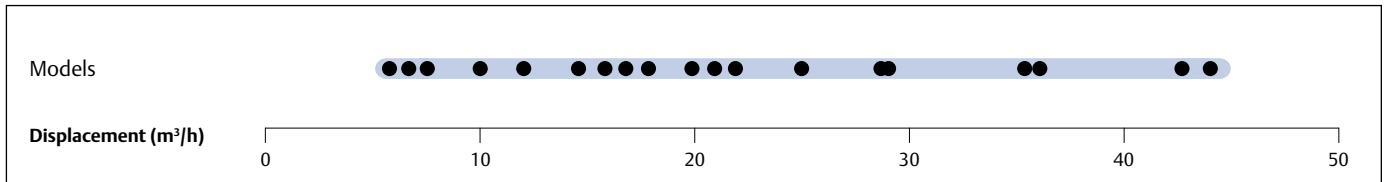
Copeland Scroll refrigeration units are available with normal or high capacity condensers to ensure optimum performance even under extreme conditions. They are equipped with dedicated medium or low temperature compressors which makes them suitable for all general refrigeration applications, such as:

- Mini markets and supermarkets
- Bars, restaurants and kitchens
- Beer cellars and beverage coolers
- Cold rooms
- Milk cooling tank

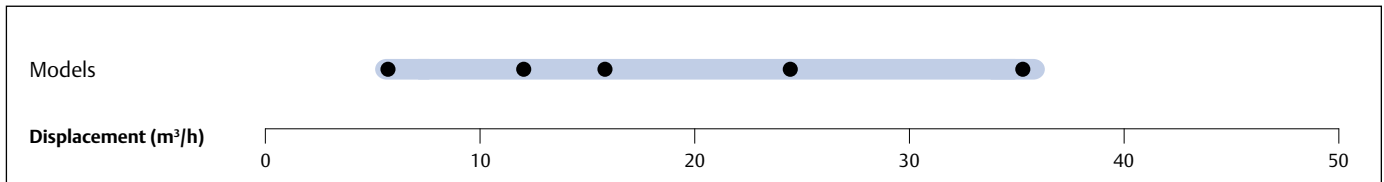


*Copeland Scroll  
Indoor Refrigeration Unit*

## Copeland Scroll Refrigeration Units Line-up



## Copeland Scroll Digital Refrigeration Units Line-up



## Features and Benefits

- Standard equipment: base plate, scroll compressor, crank case heater, condenser with 1ph fan(s), HP and LP switch, liquid receiver with rotalock-valve, suction- and discharge shut-off valves
- Suitable for multiple refrigerants: R407A/F, R448A/R449A, R404A, R134a, R450A and R513A
- Wide range of quality accessories
- Excellent efficiency and reliability

## Maximum Allowable Pressures (PS)

- Low Side PS 22.5 bar (g)
- High Side PS = 28 bar (g)

## Technical Overview

Model	Displacement (m <sup>3</sup> /h)	Receiver Capacity (l)	Number of fans	Total Fan Motor Power (W)	Suction Line Diameter (inch)	Liquid Line Diameter (inch)	Width/Depth/Height (mm)	Net Weight (kg)	Motor Version/Code		Maximum Operating Current (A)		Locked Rotor Current (A)		Sound Pressure @10m - dB(A)***
									1 Ph*	3 Ph**	1 Ph*	3 Ph**	1 Ph*	3 Ph**	
<b>Medium Temperature Models</b>															
MC-D8-ZB15KE	5.9	3.9	1	110	3/4	1/2	560/570/446	48.0	PFJ	TFD	13	5	58	26	45.8
MC-H8-ZB15KE	5.9	7.9	1	235	3/4	1/2	735/680/533	57.0	PFJ	TFD	13	5	58	26	48.6
MC-D8-ZB19KE	6.8	3.9	1	110	3/4	1/2	560/570/446	49.0	PFJ	TFD	13	7	61	32	45.9
MC-K9-ZB19KE	6.8	7.9	2	220	3/4	1/2	950/640/454	66.5	PFJ	TFD	13	7	61	32	47.5
MC-H8-ZB19KE	6.8	7.9	1	235	3/4	1/2	735/680/533	61.0	PFJ	TFD	13	7	61	32	48.7
MC-D8-ZB21KE	8.6	3.9	1	110	7/8	1/2	560/570/446	50.0	PFJ	TFD	16	7	82	40	46.4
MC-H8-ZB21KE	8.6	7.9	1	235	7/8	1/2	735/680/533	61.0	PFJ	TFD	16	7	82	40	48.9
MC-K9-ZB21KE	8.6	7.9	2	220	7/8	1/2	950/640/454	67.5	PFJ	TFD	16	7	82	40	47.8
MC-K9-ZB26KE	10.0	7.9	2	220	7/8	1/2	950/640/454	68.0	PFJ	TFD	18	9	97	46	47.8
MC-H8-ZB26KE	10.0	7.9	1	235	7/8	1/2	735/680/533	62.0	PFJ	TFD	18	9	97	46	48.9
MC-H8-ZB30KE	11.7	7.9	1	235	7/8	1/2	735/680/533	74.0	PFJ	TFD	26	10	142	49	49.1
MC-M8-ZB30KE	11.7	7.9	1	235	7/8	1/2	735/730/708	86.5	PFJ	TFD	26	10	142	49	48.6
MC-P8-ZB30KE	11.7	7.9	2	220	7/8	1/2	950/640/633	86.5		TFD		10		49	48.5
MC-H8-ZB38KE	14.4	7.9	1	235	7/8	1/2	735/680/533	77.0	PFJ	TFD	32	13	142	66	49.2
MC-M8-ZB38KE	14.4	7.9	1	235	7/8	1/2	735/730/708	89.0	PFJ	TFD	32	13	142	66	48.8
MC-P8-ZB38KE	14.4	7.9	2	220	7/8	1/2	950/640/633	89.0	PFJ	TFD	32	13	142	66	48.7
MC-M8-ZB42KE	16.2	7.9	1	235	7/8	1/2	735/730/708	91.0	PFJ		36		150		49.4
MC-R7-ZB42KE	16.2	7.9	2	470	7/8	1/2	1130/680/633	101.0	PFJ		36		150		52.7
MC-M8-ZB45KE	17.1	7.9	1	235	7/8	1/2	735/730/708	91.0		TFD		13		74	49.4
MC-M9-ZB45KE	17.1	7.9	1	400	7/8	1/2	735/730/708	95.5		TFD		13		74	49.4
MC-R7-ZB45KE	17.1	7.9	2	470	7/8	1/2	1130/680/633	101.0		TFD		13		74	49.5
MC-R7-ZB50KE	19.8	7.9	2	470	1 3/8	1/2	1130/820/621	110.0		TFD		15		100	49.3
MC-S9-ZB50KE	22.1	11.7	2	470	1 3/8	5/8	1130/820/703	113.0		TFD		15		100	49.7
MC-R7-ZB58KE	22.1	7.9	2	470	1 3/8	1/2	1130/820/621	110.0		TFD		16		95	
MC-S9-ZB58KE	22.1	11.7	2	470	1 3/8	5/8	1130/820/703	113.0		TFD		16		95	
MC-S9-ZB66KE	24.9	11.7	2	470	1 3/8	5/8	1130/820/707	116.0		TFD		18		111	50.3
MC-V9-ZB66KE	24.9	15.8	2	470	1 3/8	3/4	1330/820/821	150.0		TFD		18		111	50.2
MC-V9-ZB76KE	29.1	15.8	2	470	1 3/8	3/4	1330/820/835	151.0		TFD		20		118	50.2
MC-V6-ZB76KE	29.1	15.8	2	800	1 3/8	3/4	1330/820/835	168.0		TFD		20		118	54.7
MC-V9-ZB95KE	36.4	15.8	2	470	1 3/8	3/4	1330/820/835	155.0		TFD		28		140	50.7
MC-V6-ZB95KE	36.4	15.8	2	800	1 3/8	3/4	1330/820/835	172.0		TFD		28		140	54.7
MC-V6-ZB114KE	43.3	15.8	2	800	1 3/8	3/4	1330/820/835	174.0		TFD		33		174	54.7
MC-W9-ZB114KE	43.3	15.8	2	800	1 3/8	3/4	1640/820/864	174.0		TFD		33		174	54.7
<b>Digital Medium Temperature Models</b>															
MC-M8-ZBD30	11.7	11.7	1	235	7/8	5/8	735/730/708	86.5		TFD		8		52	48.6
MC-M9-ZBD45	17.1	11.7	1	400	7/8	5/8	735/730/708	95.5		TFD		12		74	49.4
MC-V6-ZBDT60	23.4	18.9	2	800	1 3/8	3/4	1330/820/835	207.0		TFD		8+10			57.4
MC-V6-ZBDT90	34.1	18.9	2	800	1 3/8	3/4	1330/820/835	218.0		TFD		12+13			57.4
MC-S9-ZF48KE	11.7	11.7	2	470	1 3/8	5/8	1130/820/708	189.0		TWD		29		198	54.7

\* 1ph: 230V/ 50Hz

\*\* 3 Ph: 380-420V/ 50Hz

\*\*\* @ 10m: sound pressure level at 10m distance from the compressor, free field condition

## Technical Overview

Models	Displacement (m <sup>3</sup> /h)	Receiver Capacity (l)	Number of fans	Total Fan Motor Power (W)	Suction Line Diameter (inch)	Liquid Line Diameter (inch)	Width/Depth/Height (mm)	Net Weight (kg)	Motor Version/Code		Maximum Operating Current (A)		Locked Rotor Current (A)		Sound Pressure @10m - dB(A)***
									1 Ph*	3 Ph**	1 Ph*	3 Ph**	1 Ph*	3 Ph**	
<b>Low Temperature Models</b>															
MC-B8-ZF06KE	3.3	3.3	1	85	7/8	1/2	560/570/396	64.0		TFD		5		26	46.7
MC-D8-ZF09KE	3.9	3.9	1	110	7/8	1/2	560/570/446	64.0		TFD		6		40	46.7
MC-H8-ZF09KE	7.9	7.9	1	235	7/8	1/2	735/680/533	66.0		TFD		6		40	49.1
MC-H8-ZF11KE	7.9	7.9	1	235	7/8	1/2	735/680/533	67.0		TFD		7		46	49.4
MC-H8-ZF13KE	7.9	7.9	1	235	7/8	1/2	735/680/533	77.0		TFD		8		52	49.5
MC-M8-ZF13KE	7.9	7.9	1	235	7/8	1/2	735/730/708	85.0		TFD		8		52	49.0
MC-M9-ZF13KE	7.9	7.9	1	400	7/8	1/2	735/730/708	95.5		TFD		8		52	
MC-H8-ZF15KE	7.9	7.9	1	235	7/8	1/2	735/680/533	83.0		TFD		10		64	50.0
MC-M8-ZF15KE	7.9	7.9	1	235	7/8	1/2	735/730/708	86.0		TFD		10		64	49.6
MC-R7-ZF15KE	7.9	7.9	2	470	1 3/8	1/2	1130/680/708	105.0		TFD		10		64	52.0
MC-M8-ZF18KE	7.9	7.9	1	235	7/8	1/2	735/730/708	88.0		TFD		13		74	49.9
MC-M9-ZF18KE	7.9	7.9	1	400	7/8	1/2	735/730/708	95.5		TFD		13		74	50.0
MC-S9-ZF18KE	7.9	7.9	2	470	1 3/8	1/2	1130/680/708	168.0		TFD		13		74	
MC-S9-ZF25K5	11.7	11.7	2	470	1 1/8	5/8	1130/680/703	117.0		TFD		16		102	54.7
MC-S9-ZF34K5	11.7	11.7	2	470	1 3/8	5/8	1130/680/703	141.0		TFD		25		100	54.7
MC-V6-ZF41K5	11.7	11.7	2	800	1 3/8	3/4	1330/820/830	168.0		TFD		29		118	57.4
MC-V6-ZF49K5	11.7	11.7	2	800	1 3/8	3/4	1330/820/830	185.0		TFD		30		139	57.4

\* 1ph: 230V/ 50Hz

\*\* 3 Ph: 380-420V/ 50Hz

\*\*\* @ 10m: sound pressure level at 10m distance from the compressor, free field condition

## Capacity Data

Ambient Temperature: 32°C																	
R407A	Cooling Capacity (kW)							R407A	Power Input (kW)								
	Evaporating Temperature (°C)								Evaporating Temperature (°C)								
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5		
Medium Temperature Models																	
MC-H8-ZB15KE					3.5	4.2	5.9	MC-H8-ZB15KE						1.7	1.8	1.9	
MC-D8-ZB15KE					3.2	3.8	5.3	MC-D8-ZB15KE						1.8	1.9	2.1	
MC-D8-ZB19KE					3.7*	4.5	6.1	MC-D8-ZB19KE						2.2*	2.3	2.5	
MC-K9-ZB19KE					4.1	4.9	6.8	MC-K9-ZB19KE						2.1	2.1	2.3	
MC-H8-ZB19KE					4.1	4.9	6.9	MC-H8-ZB19KE						2.1	2.2	2.3	
MC-K9-ZB21KE					4.8	5.8	8.0	MC-K9-ZB21KE						2.5	2.6	2.8	
MC-H8-ZB21KE					4.8	5.8	8.0	MC-H8-ZB21KE						2.5	2.6	2.8	
MC-D8-ZB21KE					4.2*	5.1		MC-D8-ZB21KE						2.7*	3.0		
MC-K9-ZB26KE					5.4	6.4	8.8	MC-K9-ZB26KE						2.9	3.0	3.4	
MC-H8-ZB26KE					5.4	6.4	8.9	MC-H8-ZB26KE						2.9	3.0	3.4	
MC-M8-ZB30KE					6.4	7.8	10.8	MC-M8-ZB30KE						3.3	3.4	3.7	
MC-P8-ZB30KE					6.5	7.8	10.9	MC-P8-ZB30KE						3.2	3.4	3.7	
MC-H8-ZB30KE					5.9*	7.3		MC-H8-ZB30KE						3.5*	3.7		
MC-H8-ZB38KE					7.2*	8.6*		MC-H8-ZB38KE						4.5*	4.9*		
MC-P8-ZB38KE					7.8*	9.6	13.0	MC-P8-ZB38KE						4.1*	4.4	5.0	
MC-M8-ZB38KE					7.7*	9.5		MC-M8-ZB38KE						4.2*	4.5		
MC-R7-ZB42KE**					6.0*	9.3	11.1	15.3	MC-R7-ZB42KE**					4.4*	4.8	5.0	5.3
MC-M8-ZB42KE**					5.6*	8.2*	10.0	13.4	MC-M8-ZB42KE**					4.6*	5.1*	5.5	6.0
MC-M8-ZB45KE					8.5*	10.3			MC-M8-ZB45KE					5.2*	5.6		
MC-R7-ZB45KE					9.6	11.5	15.7		MC-R7-ZB45KE					4.9	5.1	5.5	
MC-M9-ZB45KE					9.3	11.0	14.9		MC-M9-ZB45KE					5.1	5.3	5.8	
MC-R7-ZB50KE					11.0	13.2	18.0		MC-R7-ZB50KE					6.0	6.3	6.9	
MC-S9-ZB50KE					11.4	13.7	19.0		MC-S9-ZB50KE					5.7	5.9	6.4	
MC-R7-ZB58KE					11.1*	13.8			MC-R7-ZB58KE					6.6*	7.1		
MC-S9-ZB58KE					11.9	14.5	20.4		MC-S9-ZB58KE					6.3	6.7	7.4	
MC-V9-ZB66KE					13.8	16.7	23.2		MC-V9-ZB66KE					6.9	7.3	8.1	
MC-S9-ZB66KE					13.2	15.9	21.9		MC-S9-ZB66KE					7.3	7.7	8.7	
MC-V9-ZB76KE					15.8	19.0	26.3		MC-V9-ZB76KE					8.2	8.7	9.8	
MC-V6-ZB76KE					16.7	20.2	28.4		MC-V6-ZB76KE					8.0	8.4	9.2	
MC-V6-ZB95KE					19.5	23.5	32.6		MC-V6-ZB95KE					10.7	11.3	12.6	
MC-V9-ZB95KE					17.4*	21.5			MC-V9-ZB95KE					11.3*	12.1		
MC-V6-ZB114KE					21.4*	26.8			MC-V6-ZB114KE					13.0*	13.9		
MC-W9-ZB114KE					22.5	27.4	38.4		MC-W9-ZB114KE					12.9	13.6	15.4	

Suction Gas Return 20°C / Subcooling 0K

\*Suction Superheat 10K, Subcooling 0K

\*\* Single Phase only

Preliminary data

## Capacity Data

Ambient Temperature: 32°C															
R407A	Cooling Capacity (kW)							R407A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
<b>Low Temperature Models</b>															
MC-H8-ZF09KE		1.7	2.1	3.2	4.7	5.5	7.6	MC-H8-ZF09KE		1.7	1.7	1.8	2.1	2.3	2.7
MC-D8-ZF09KE		1.6	2.0	3.0	4.3	5.0	6.6*	MC-D8-ZF09KE		1.7	1.7	1.9	2.1	2.3	2.8*
MC-M9-ZF13KE		2.3	2.9	4.5	6.7	8.0	11.1	MC-M9-ZF13KE		2.5	2.6	2.8	3.2	3.4	4.1
MC-H8-ZF13KE		2.3	2.8	4.3	6.3	7.4	10.0	MC-H8-ZF13KE		2.5	2.6	2.9	3.4	3.7	4.6
MC-M8-ZF13KE		2.3	2.9	4.4	6.5	7.7	10.6	MC-M8-ZF13KE		2.4	2.5	2.8	3.2	3.4	4.2
MC-M8-ZF15KE		2.8	3.5	5.3	7.6	9.0	12.2	MC-M8-ZF15KE		2.9	3.1	3.6	4.2	4.7	5.8
MC-R7-ZF15KE		2.9	3.6	5.6	8.2	9.7	13.5	MC-R7-ZF15KE		3.0	3.1	3.5	4.0	4.4	5.3
MC-H8-ZF15KE		2.7	3.4	5.1	7.2	8.5		MC-H8-ZF15KE		3.0	3.3	3.8	4.6	5.1	
MC-S9-ZF18KE		3.5	4.4	6.7	9.9	11.8	16.3	MC-S9-ZF18KE		3.5	3.7	4.1	4.6	4.9	5.8
MC-M8-ZF18KE		3.3	4.2	6.2	8.9	10.4	13.7*	MC-M8-ZF18KE		3.6	3.8	4.4	5.1	5.6	6.8*
MC-M9-ZF18KE		3.4	4.3	6.5	9.3	11.1	14.9	MC-M9-ZF18KE		3.6	3.8	4.3	4.9	5.3	6.4
MC-S9-ZF25K5		4.4	5.5	8.5	12.4	14.8		MC-S9-ZF25K5		4.3	4.6	5.3	6.2	6.7	
MC-S9-ZF34K5		5.9	7.5	11.4	16.4	19.4		MC-S9-ZF34K5		5.6	6.2	7.4	9.0	9.9	
MC-V6-ZF41K5		7.4	9.4	14.2	20.6	24.4		MC-V6-ZF41K5		6.8	7.4	8.7	10.2	11.1	
MC-V6-ZF49K5		8.7	11.1	16.9	24.5	29.1		MC-V6-ZF49K5		8.3	9.1	10.8	12.8	13.9	
<b>Digital Medium Temperature Models</b>															
MC-M8-ZBD30					6.8	8.1	11.1	MC-M8-ZBD30					3.4	3.6	4.0
MC-M9-ZBD45					9.2	11.0	15.0	MC-M9-ZBD45					4.9	5.2	5.8
MC-V6-ZBDT60				9.4	14.4	17.4	24.3	MC-V6-ZBDT60				6.0	6.4	6.7	7.3
MC-V6-ZBDT90				12.7	19.1	22.8	31.4	MC-V6-ZBDT90				8.8	9.5	9.9	10.9

Suction Gas Return 20°C / Subcooling 0K

\*Suction Superheat 10K, Subcooling 0K

\*\* Single Phase only

Preliminary data

## Capacity Data

Ambient Temperature: 32°C															
R407F	Cooling Capacity (kW)							R407F	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
Medium Temperature Models															
MC-H8-ZB15KE					3.4	4.1	5.7	MC-H8-ZB15KE					1.8	1.9	1.9
MC-D8-ZB15KE					3.0	3.7	5.0	MC-D8-ZB15KE					2.0	2.0	2.2
MC-H8-ZB19KE					4.0	4.8	6.7	MC-H8-ZB19KE					2.2	2.3	2.5
MC-K9-ZB19KE					4.0	4.8	6.7	MC-K9-ZB19KE					2.2	2.3	2.5
MC-D8-ZB19KE					3.5*	4.3	5.9	MC-D8-ZB19KE					2.4*	2.5	2.8
MC-K9-ZB21KE					4.7	5.6	7.7	MC-K9-ZB21KE					2.7	2.9	3.1
MC-H8-ZB21KE					3.9*	4.7*		MC-H8-ZB21KE					3.0*	3.2*	
MC-H8-ZB26KE					5.1*	6.3	8.6	MC-H8-ZB26KE					3.3*	3.5	3.9
MC-K9-ZB26KE					5.1*	6.3	8.6	MC-K9-ZB26KE					3.3*	3.5	3.9
MC-M8-ZB30KE				4.1*	6.6	8.0	11.2	MC-M8-ZB30KE			3.3*	3.5	3.7	4.1	
MC-P8-ZB30KE				4.1*	6.6	8.0	11.3	MC-P8-ZB30KE			3.2*	3.5	3.6	4.0	
MC-H8-ZB30KE					6.1*	7.5		MC-H8-ZB30KE					3.8*	4.0	
MC-M8-ZB38KE					7.6*	9.3		MC-M8-ZB38KE					4.7*	4.9	
MC-P8-ZB38KE					7.7*	9.4		MC-P8-ZB38KE					4.6*	4.9	
MC-H8-ZB38KE					7.0*	8.4*		MC-H8-ZB38KE					5.0*	5.3*	
MC-R7-ZB45KE				5.9*	9.7	11.8	16.4	MC-R7-ZB45KE			4.7*	5.2	5.5	6.0	
MC-M9-ZB45KE					9.1*	11.2	15.5	MC-M9-ZB45KE					5.4*	5.7	6.4
MC-M8-ZB45KE					8.4*	10.2*		MC-M8-ZB45KE					5.6*	6.0*	
MC-R7-ZB58KE					11.7*	14.6		MC-R7-ZB58KE					7.1*	7.6	
MC-S9-ZB58KE				7.1*	12.4*	15.4	21.5	MC-S9-ZB58KE			6.0*	6.7*	7.2	8.1	
MC-V9-ZB66KE				8.7*	14.6	17.7	24.6	MC-V9-ZB66KE			6.6*	7.4	7.8	8.7	
MC-S9-ZB66KE					13.6*	16.8		MC-S9-ZB66KE					7.7*	8.3	
MC-V9-ZB76KE				9.8*	16.3*	20.1	27.8	MC-V9-ZB76KE			7.6*	8.7*	9.4	10.7	
MC-V6-ZB76KE				10.6*	17.8	21.6	30.2	MC-V6-ZB76KE			7.6*	8.5	8.9	9.9	
MC-W9-ZB114KE				13.3*	23.2*	29.0		MC-W9-ZB114KE			12.1*	13.7*	14.7		
MC-V6-ZB114KE					22.6*	28.2		MC-V6-ZB114KE					14.0*	15.1	
Low Temperature Models															
MC-B8-ZF06KE		1.2	1.4	2.1				MC-B8-ZF06KE		1.5	1.6	1.8			
MC-H8-ZF09KE		1.7	2.2	3.3	4.9	5.8	7.9	MC-H8-ZF09KE		1.8	1.8	1.9	2.2	2.4	2.8
MC-D8-ZF09KE		1.7	2.1	3.1	4.4	5.2		MC-D8-ZF09KE		1.8	1.8	2.0	2.3	2.5	
MC-H8-ZF11KE		2.2	2.7	4.1	5.9	6.9	9.3	MC-H8-ZF11KE		2.1	2.2	2.4	2.7	3.0	3.5
MC-M9-ZF13KE		2.4	3.1	4.7	7.0	8.3	11.6	MC-M9-ZF13KE		2.6	2.7	3.0	3.3	3.6	4.3
MC-M8-ZF13KE		2.4	3.0	4.6	6.8	8.1	11.0	MC-M8-ZF13KE		2.5	2.6	2.9	3.4	3.7	4.5
MC-H8-ZF13KE		2.4	3.0	4.5	6.5	7.7		MC-H8-ZF13KE		2.6	2.8	3.1	3.6	4.0	
MC-H8-ZF15KE		2.8	3.6	5.3	7.5			MC-H8-ZF15KE		3.2	3.5	4.1	5.0		
MC-R7-ZF15KE		3.0	3.8	5.8	8.5	10.2	14.0	MC-R7-ZF15KE		3.1	3.3	3.7	4.2	4.6	5.6
MC-M8-ZF15KE		2.9	3.7	5.5	8.0	9.4		MC-M8-ZF15KE		3.0	3.3	3.8	4.5	5.0	
MC-M8-ZF18KE		3.5	4.3	6.5	9.2	10.8		MC-M8-ZF18KE		3.8	4.1	4.7	5.5	6.0	
MC-M9-ZF18KE		3.5	4.5	6.8	9.7	11.5		MC-M9-ZF18KE		3.8	4.0	4.6	5.2	5.7	
MC-S9-ZF18KE		3.6	4.6	7.1	10.4	12.3	17.0	MC-S9-ZF18KE		3.7	3.9	4.3	4.9	5.2	6.1
Digital Medium Temperature Models															
MC-M8-ZBD30				4.6*	6.8	8.1	10.9	MC-M8-ZBD30				2.8*	3.3	3.6	4.1
MC-M9-ZBD45					9.4*	11.6	15.5	MC-M9-ZBD45					5.1*	5.5	6.6
MC-V6-ZBDT60				9.1*	14.3	17.2	24.0	MC-V6-ZBDT60				6.1*	6.7	6.9	7.6
MC-V6-ZBDT90				12.1*	19.7	23.7	32.6	MC-V6-ZBDT90				8.7*	10.1	10.7	12.2

Suction Gas Return 20°C / Subcooling 0K

\*Suction Superheat 10K, Subcooling 0K

Preliminary data

## Capacity Data

Ambient Temperature: 32°C															
R448A	Cooling Capacity (kW)							R448A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
<b>Medium Temperature Models</b>															
MC-D8-ZB15KE				2.1	3.2	3.8	5.3	MC-D8-ZB15KE				1.7	1.8	1.8	2.0
MC-H8-ZB15KE				2.2	3.5	4.2	5.9	MC-H8-ZB15KE				1.7	1.7	1.7	1.8
MC-D8-ZB19KE				2.3*	3.7	4.4	6.0	MC-D8-ZB19KE				2.0*	2.1	2.2	2.5
MC-H8-ZB19KE				2.6	4.0	4.8	6.6	MC-H8-ZB19KE				1.9	2.0	2.1	2.3
MC-K9-ZB19KE				2.6	3.9	4.7	6.6	MC-K9-ZB19KE				1.9	2.0	2.0	2.3
MC-D8-ZB21KE				2.9*	4.5	5.3	7.0	MC-D8-ZB21KE				2.4*	2.8	3.0	3.4
MC-H8-ZB21KE				3.3	4.9	5.9	8.1	MC-H8-ZB21KE				2.3	2.5	2.6	2.8
MC-K9-ZB21KE				3.3	4.9	5.9	8.1	MC-K9-ZB21KE				2.3	2.5	2.6	2.9
MC-H8-ZB26KE				3.8	5.6	6.7	9.2	MC-H8-ZB26KE				2.8	3.0	3.1	3.5
MC-K9-ZB26KE				3.7	5.6	6.6	9.1	MC-K9-ZB26KE				2.8	3.0	3.2	3.5
MC-H8-ZB30KE				4.0*	6.4	7.5	10.3	MC-H8-ZB30KE				3.2*	3.6	3.8	4.2
MC-P8-ZB30KE				4.4	6.7	8.0	11.0	MC-P8-ZB30KE				3.1	3.3	3.4	3.8
MC-M8-ZB30KE				4.4	6.7	8.0	10.9	MC-M8-ZB30KE				3.1	3.3	3.5	3.9
MC-H9-ZB38KE				4.7*	7.5	8.8		MC-H9-ZB38KE				4.3*	4.8	5.1	
MC-P8-ZB38KE				5.1*	8.0	9.5	13.0	MC-P8-ZB38KE				3.9*	4.3	4.5	5.1
MC-M8-ZB38KE				5.0*	8.0	9.4	12.8	MC-M8-ZB38KE				4.0*	4.4	4.6	5.2
MC-M8-ZB42KE**				5.5*	8.7	10.3	13.9	MC-M8-ZB42KE**				4.6*	5.2	5.5	6.2
MC-R7-ZB42KE**				6.3	9.5	11.4	15.7	MC-R7-ZB42KE**				4.4	4.7	4.9	5.4
MC-M8-ZB45KE				5.7*	9.0	10.6	14.3	MC-M8-ZB45KE				4.7*	5.2	5.5	6.3
MC-R7-ZB45KE				6.5	9.8	11.8	16.1	MC-R7-ZB45KE				4.5	4.8	5.0	5.5
MC-M9-ZB45KE				6.3	9.5	11.3	15.4	MC-M9-ZB45KE				4.6	5.0	5.2	5.9
MC-R7-ZB58KE				7.1*	12.0	14.4	19.7	MC-R7-ZB58KE				6.1*	6.8	7.2	8.1
MC-S9-ZB58KE				7.5*	12.5	15.1	20.8	MC-S9-ZB58KE				5.9*	6.4	6.7	7.5
MC-S9-ZB66KE				8.6*	13.9	16.5	22.4	MC-S9-ZB66KE				6.7*	7.4	7.8	8.7
MC-V9-ZB66KE				9.0*	14.5	17.3	23.7	MC-V9-ZB66KE				6.5*	7.0	7.3	8.1
MC-V6-ZB76KE				10.9*	17.4	21.0	29.0	MC-V6-ZB76KE				7.4*	8.0	8.4	9.3
MC-V9-ZB76KE				10.3*	16.6	19.8	26.9	MC-V9-ZB76KE				7.5*	8.3	8.8	10.0
MC-V9-ZB95KE				11.2*	18.8	22.5	30.2	MC-V9-ZB95KE				10.2*	11.5	12.3	14.2
MC-W9-ZB114KE				14.1*	23.6	28.5	39.3	MC-W9-ZB114KE				11.9*	13.1	13.8	15.6
MC-V6-ZB114KE				13.8*	23.1	27.9	38.3	MC-V6-ZB114KE				12.2*	13.4	14.1	16.1
<b>Low Temperature Models</b>															
MC-D8-ZF09KE		1.7	2.2	3.2	4.5	5.2		MC-D8-ZF09KE		2.0	2.0	2.2	2.5	2.7	
MC-H8-ZF09KE		1.8	2.3	3.4	4.9	5.7		MC-H8-ZF09KE		1.9	1.9	2.0	2.3	2.5	
MC-H8-ZF13KE		2.5	3.1	4.7	6.7	7.8		MC-H8-ZF13KE		2.6	2.6	2.9	3.4	3.7	
MC-M8-ZF13KE		2.6	3.2	4.9	7.0	8.2		MC-M8-ZF13KE		2.5	2.5	2.8	3.1	3.4	
MC-M9-ZF13KE		2.6	3.3	5.0	7.2	8.5		MC-M9-ZF13KE		2.6	2.6	2.8	3.1	3.4	
MC-H8-ZF15KE		3.0	3.8	5.5	7.6			MC-H8-ZF15KE		3.4	3.6	4.2	5.0		
MC-M8-ZF15KE		3.1	3.9	5.8	8.1	9.4		MC-M8-ZF15KE		3.3	3.4	3.9	4.5	5.0	
MC-R7-ZF15KE		3.2	4.0	6.1	8.7	10.3		MC-R7-ZF15KE		3.3	3.4	3.7	4.3	4.6	
MC-M8-ZF18KE		3.6	4.5	6.7	9.3	10.8		MC-M8-ZF18KE		4.1	4.2	4.6	5.4	5.9	
MC-M9-ZF18KE		3.7	4.6	6.9	9.8	11.5		MC-M9-ZF18KE		4.0	4.0	4.4	5.0	5.4	
MC-S9-ZF18KE		3.8	4.8	7.2	10.4	12.3		MC-S9-ZF18KE		3.8	3.8	4.1	4.6	4.9	
<b>Digital Medium Temperature Models</b>															
MC-M8-ZBD30				4.5	6.8	8.1	11.1	MC-M8-ZBD30				2.7	3.2	3.5	4.1
MC-M9-ZBD45				6.5	9.7	11.6	15.6	MC-M9-ZBD45				4.0	4.8	5.2	6.1
MC-V6-ZBDT60				9.4	14.3	17.1	23.8	MC-V6-ZBDT60				5.8	6.3	6.6	7.4
MC-V6-ZBDT90				13.2	19.9	23.6	32.4	MC-V6-ZBDT90				8.3	9.3	9.9	11.3

Suction Gas Return 20°C / Subcooling OK

\*Suction Superheat 10K, Subcooling OK

\*\* Single Phase only

Preliminary data

## Capacity Data

Ambient Temperature: 32°C															
R449A	Cooling Capacity (kW)							R449A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
<b>Medium Temperature Models</b>															
MC-D8-ZB15KE				2.1	3.2	3.8	5.3	MC-D8-ZB15KE				1.7	1.8	1.8	2.0
MC-H8-ZB15KE				2.2	3.5	4.2	5.9	MC-H8-ZB15KE				1.7	1.7	1.7	1.8
MC-D8-ZB19KE				2.3*	3.7	4.4	6.0	MC-D8-ZB19KE				2.0*	2.1	2.2	2.5
MC-H8-ZB19KE				2.6	4.0	4.8	6.6	MC-H8-ZB19KE				1.9	2.0	2.1	2.3
MC-K9-ZB19KE				2.6	3.9	4.7	6.6	MC-K9-ZB19KE				1.9	2.0	2.0	2.3
MC-D8-ZB21KE				2.9*	4.5	5.3	7.0	MC-D8-ZB21KE				2.4*	2.8	3.0	3.4
MC-H8-ZB21KE				3.3	4.9	5.9	8.1	MC-H8-ZB21KE				2.3	2.5	2.6	2.8
MC-K9-ZB21KE				3.3	4.9	5.9	8.1	MC-K9-ZB21KE				2.3	2.5	2.6	2.9
MC-H8-ZB26KE				3.8	5.6	6.7	9.2	MC-H8-ZB26KE				2.8	3.0	3.1	3.5
MC-K9-ZB26KE				3.7	5.6	6.6	9.1	MC-K9-ZB26KE				2.8	3.0	3.2	3.5
MC-H8-ZB30KE				4.0*	6.4	7.5	10.3	MC-H8-ZB30KE				3.2*	3.6	3.8	4.2
MC-P8-ZB30KE				4.4	6.7	8.0	11.0	MC-P8-ZB30KE				3.1	3.3	3.4	3.8
MC-M8-ZB30KE				4.4	6.7	8.0	10.9	MC-M8-ZB30KE				3.1	3.3	3.5	3.9
MC-P8-ZB38KE				5.1*	8.0	9.5	13.0	MC-P8-ZB38KE				3.9*	4.3	4.5	5.1
MC-M8-ZB38KE				5.0*	8.0	9.4	12.8	MC-M8-ZB38KE				4.0*	4.4	4.6	5.2
MC-H8-ZB38KE				4.7*	7.5	8.8		MC-H8-ZB38KE				4.3*	4.8	5.1	
MC-M8-ZB42KE**				5.5*	8.7	10.3	13.9	MC-M8-ZB42KE**				4.6*	5.2	5.5	6.2
MC-R7-ZB42KE**				6.3	9.5	11.4	15.7	MC-R7-ZB42KE**				4.4	4.7	4.9	5.4
MC-M8-ZB45KE				5.7*	9.0	10.6	14.3	MC-M8-ZB45KE				4.7*	5.2	5.5	6.3
MC-R7-ZB45KE				6.5	9.8	11.8	16.1	MC-R7-ZB45KE				4.5	4.8	5.0	5.5
MC-M9-ZB45KE				6.3	9.5	11.3	15.4	MC-M9-ZB45KE				4.6	5.0	5.2	5.9
MC-R7-ZB58KE				7.1*	12.0	14.4	19.7	MC-R7-ZB58KE				6.1*	6.8	7.2	8.1
MC-S9-ZB58KE				7.5*	12.5	15.1	20.8	MC-S9-ZB58KE				5.9*	6.4	6.7	7.5
MC-S9-ZB66KE				8.6*	13.9	16.5	22.4	MC-S9-ZB66KE				6.7*	7.4	7.8	8.7
MC-V9-ZB66KE				9.0*	14.5	17.3	23.7	MC-V9-ZB66KE				6.4*	7.0	7.3	8.1
MC-V6-ZB76KE				10.9*	17.4	21.0	29.0	MC-V6-ZB76KE				7.4*	8.0	8.4	9.3
MC-V9-ZB76KE				10.3*	16.6	19.8	26.9	MC-V9-ZB76KE				7.5*	8.3	8.8	10.0
MC-V6-ZB95KE				12.3*	20.5	24.5	33.4	MC-V6-ZB95KE				9.9*	10.8	11.4	12.8
MC-V9-ZB95KE				11.2*	18.8	22.5	30.2	MC-V9-ZB95KE				10.2*	11.5	12.3	14.2
MC-V6-ZB114KE				13.7*	23.1	27.9	38.3	MC-V6-ZB114KE				12.2*	13.4	14.1	16.1
MC-W9-ZB114KE				14.1*	23.6	28.5	39.3	MC-W9-ZB114KE				11.9*	13.1	13.8	15.6
<b>Low Temperature Models</b>															
MC-D8-ZF09KE		1.7	2.2	3.2	4.5	5.2		MC-D8-ZF09KE		2.0	2.0	2.2	2.5	2.7	
MC-H8-ZF09KE		1.8	2.3	3.4	4.9	5.7		MC-H8-ZF09KE		1.9	1.9	2.0	2.3	2.5	
MC-H8-ZF13KE		2.5	3.1	4.7	6.7	7.8		MC-H8-ZF13KE		2.6	2.6	2.9	3.4	3.7	
MC-M8-ZF13KE		2.6	3.2	4.9	7.0	8.2		MC-M8-ZF13KE		2.5	2.5	2.8	3.1	3.4	
MC-M9-ZF13KE		2.6	3.3	5.0	7.2	8.5		MC-M9-ZF13KE		2.6	2.6	2.8	3.1	3.4	
MC-H8-ZF15KE		3.0	3.8	5.5	7.6			MC-H8-ZF15KE		3.4	3.6	4.2	5.0		
MC-M8-ZF15KE		3.1	3.9	5.8	8.1	9.4		MC-M8-ZF15KE		3.3	3.4	3.9	4.5	5.0	
MC-R7-ZF15KE		3.2	4.0	6.1	8.7	10.3		MC-R7-ZF15KE		3.3	3.4	3.7	4.3	4.6	
MC-M8-ZF18KE		3.6	4.5	6.7	9.3	10.8		MC-M8-ZF18KE		4.1	4.2	4.6	5.4	5.9	
MC-M9-ZF18KE		3.7	4.6	6.9	9.8	11.5		MC-M9-ZF18KE		4.0	4.0	4.4	5.0	5.4	
MC-S9-ZF18KE		3.8	4.8	7.2	10.4	12.3		MC-S9-ZF18KE		3.8	3.8	4.1	4.6	4.9	
<b>Digital Medium Temperature Models</b>															
MC-M8-ZBD30				4.5	6.8	8.1	11.1	MC-M8-ZBD30				2.7	3.2	3.5	4.1
MC-M9-ZBD45				6.5	9.7	11.6	15.6	MC-M9-ZBD45				4.0	4.8	5.2	6.1
MC-V6-ZBDT60				9.4	14.3	17.1	23.8	MC-V6-ZBDT60				5.8	6.3	6.6	7.4
MC-V6-ZBDT90				13.2	19.9	23.6	32.4	MC-V6-ZBDT90				8.3	9.3	9.9	11.3

Suction Gas Return 20°C / Subcooling 0K

\*Suction Superheat 10K, Subcooling 0K

\*\* Single Phase only

Preliminary data



## Capacity Data

Ambient Temperature: 32°C															
R404A	Cooling Capacity (kW)							R404A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
Medium Temperature Models															
MC-H8-ZB15KE				2.5	3.6	4.3	5.8	MC-H8-ZB15KE				1.9	1.9	1.9	1.9
MC-D8-ZB15KE				2.2	3.3	3.8	5.0	MC-D8-ZB15KE				1.9	2.0	2.0	2.1
MC-K9-ZB19KE				2.9	4.1	4.8	6.5	MC-K9-ZB19KE				2.1	2.2	2.2	2.4
MC-H8-ZB19KE				2.9	4.1	4.8	6.5	MC-H8-ZB19KE				2.1	2.2	2.3	2.4
MC-D8-ZB19KE				2.6	3.7	4.3	5.6	MC-D8-ZB19KE				2.2	2.4	2.5	2.6
MC-H8-ZB21KE				3.6	5.1	5.9	7.8	MC-H8-ZB21KE				2.6	2.7	2.8	3.0
MC-K9-ZB21KE				3.6	5.1	5.9	7.8	MC-K9-ZB21KE				2.6	2.7	2.8	3.0
MC-D8-ZB21KE				3.2	4.4	5.0	6.4	MC-D8-ZB21KE				2.8	3.1	3.2	3.5
MC-K9-ZB26KE				4.1	5.7	6.6	8.7	MC-K9-ZB26KE				3.1	3.3	3.4	3.6
MC-H8-ZB26KE				4.1	5.7	6.6	8.6	MC-H8-ZB26KE				3.1	3.3	3.4	3.7
MC-H8-ZB30KE				4.6	6.4	7.4	9.6	MC-H8-ZB30KE				3.7	3.9	4.1	4.4
MC-P8-ZB30KE				5.0	7.1	8.3	11.1	MC-P8-ZB30KE				3.3	3.5	3.5	3.8
MC-M8-ZB30KE				4.8	6.8	7.9	10.5	MC-M8-ZB30KE				3.4	3.6	3.7	4.0
MC-H8-ZB38KE				5.3	7.3	8.4	10.7	MC-H8-ZB38KE				4.8	5.2	5.4	6.0
MC-P8-ZB38KE				6.0	8.4	9.7	12.9	MC-P8-ZB38KE				4.2	4.5	4.7	5.1
MC-M8-ZB38KE				5.7	8.0	9.2	12.0	MC-M8-ZB38KE				4.4	4.8	5.0	5.4
MC-R7-ZB42KE**				6.9	9.8	11.4	15.1	MC-R7-ZB42KE**				4.8	5.1	5.2	5.6
MC-M8-ZB42KE**				6.3	8.7	10.0	12.8	MC-M8-ZB42KE**				5.1	5.6	5.8	6.3
MC-R7-ZB45KE				7.1	10.1	11.8	15.6	MC-R7-ZB45KE				5.0	5.3	5.4	5.8
MC-M8-ZB45KE				6.5	8.9	10.3	13.2	MC-M8-ZB45KE				5.3	5.7	6.0	6.5
MC-M9-ZB45KE				6.9	9.6	11.1	14.5	MC-M9-ZB45KE				5.1	5.5	5.7	6.1
MC-S9-ZB50KE				7.9	12.0	14.2	18.9	MC-S9-ZB50KE				5.8	6.1	6.3	6.7
MC-R7-ZB50KE				7.5	11.4	13.4	17.7	MC-R7-ZB50KE				6.0	6.5	6.7	7.2
MC-R7-ZB58KE				8.5	12.4	14.5	18.8	MC-R7-ZB58KE				6.7	7.3	7.6	8.3
MC-S9-ZB58KE				8.9	13.1	15.4	20.3	MC-S9-ZB58KE				6.4	6.9	7.1	7.7
MC-S9-ZB66KE				10.3	14.5	16.8	21.7	MC-S9-ZB66KE				7.4	7.9	8.2	8.9
MC-V9-ZB66KE				10.7	15.1	17.6	23.0	MC-V9-ZB66KE				7.1	7.6	7.8	8.5
MC-V6-ZB76KE				12.9	18.5	21.6	28.7	MC-V6-ZB76KE				8.0	8.6	8.9	9.6
MC-V9-ZB76KE				12.2	17.2	19.9	25.8	MC-V9-ZB76KE				8.3	9.0	9.4	10.3
MC-V6-ZB95KE				14.9	21.5	25.2	33.1	MC-V6-ZB95KE				10.7	11.4	11.9	13.0
MC-V9-ZB95KE				12.2*	19.3	22.4	28.7	MC-V9-ZB95KE				11.2*	12.4	13.0	14.3
MC-W9-ZB114KE				16.8	24.6	28.8	38.0	MC-W9-ZB114KE				13.2	14.1	14.6	16.0
MC-V6-ZB114KE				15.1*	24.3	28.4	37.3	MC-V6-ZB114KE				13.1*	14.3	14.8	16.2

Suction Gas Return 20°C / Subcooling 0K

\*Suction Superheat 10K, Subcooling 0K

\*\* Single Phase only

Ambient Temperature: 32°C															
R404A	Cooling Capacity (kW)							R404A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
Low Temperature Models															
MC-B8-ZF06KE		1.3	1.6	2.2	2.9	3.2		MC-B8-ZF06KE		1.7	1.8	2.1	2.4	2.6	
MC-D8-ZF09KE		1.9	2.3	3.3	4.4	5.0	6.3	MC-D8-ZF09KE		2.0	2.1	2.3	2.6	2.8	3.2
MC-H8-ZF09KE		2.0	2.5	3.6	4.9	5.7	7.5	MC-H8-ZF09KE		2.0	2.0	2.2	2.5	2.6	3.0
MC-H8-ZF11KE		2.5	3.0	4.3	5.8	6.7	8.7	MC-H8-ZF11KE		2.4	2.5	2.7	3.1	3.3	3.8
MC-M9-ZF13KE		2.9	3.6	5.3	7.3	8.5	11.2	MC-M9-ZF13KE		2.6	2.7	3.0	3.4	3.6	4.1
MC-H8-ZF13KE		2.8	3.4	4.9	6.6	7.6	9.7	MC-H8-ZF13KE		2.6	2.7	3.1	3.5	3.8	4.3
MC-M8-ZF13KE		2.8	3.5	5.1	7.0	8.1	10.6	MC-M8-ZF13KE		2.5	2.6	2.9	3.3	3.6	4.1
MC-R7-ZF15KE		3.5	4.4	6.4	8.9	10.4	13.6	MC-R7-ZF15KE		3.4	3.6	4.0	4.5	4.9	5.7
MC-M8-ZF15KE		3.4	4.2	5.9	8.1	9.2	11.7	MC-M8-ZF15KE		3.3	3.5	4.0	4.7	5.1	6.0
MC-H8-ZF15KE		3.3	4.0	5.6	7.4	8.4		MC-H8-ZF15KE		3.4	3.7	4.3	5.0	5.5	
MC-M8-ZF18KE		3.9	4.8	6.8	9.2	10.5	13.3	MC-M8-ZF18KE		4.0	4.3	4.8	5.5	5.9	6.8
MC-M9-ZF18KE		4.0	5.0	7.2	9.8	11.3	14.6	MC-M9-ZF18KE		4.0	4.2	4.6	5.2	5.6	6.4
MC-S9-ZF18KE		4.2	5.2	7.6	10.6	12.4	16.5	MC-S9-ZF18KE		3.8	4.0	4.4	4.9	5.2	5.9
MC-S9-ZF25K5		5.3	6.5	9.3	13.0	15.1	19.8	MC-S9-ZF25K5		4.2	4.5	5.2	6.1	6.5	7.5
MC-S9-ZF34K5		6.7	8.3	11.9	16.1	18.5		MC-S9-ZF34K5		5.6	6.0	7.1	8.3	9.1	
MC-V6-ZF41K5		8.6	10.6	15.4	21.4	24.8	32.6	MC-V6-ZF41K5		7.0	7.5	8.7	10.1	10.8	12.4
MC-V6-ZF49K5		10.2	12.5	18.1	24.8	28.7		MC-V6-ZF49K5		8.4	8.9	10.3	12.1	13.1	
Digital Medium Temperature Models															
MC-M8-ZBD30				5.0	6.9	8.0	10.5	MC-M8-ZBD30				3.0	3.4	3.6	4.0
MC-M9-ZBD45				7.1	9.8	11.4	14.6	MC-M9-ZBD45				4.5	5.2	5.6	6.4
MC-V6-ZBDT60				10.4	14.9	17.6	23.6	MC-V6-ZBDT60				6.3	6.7	7.0	7.5
MC-V6-ZBDT90				14.1	20.4	24.1	32.5	MC-V6-ZBDT90				9.6	10.4	10.8	11.9

Suction Gas Return 20°C / Subcooling 0K

\*Suction Superheat 10K, Subcooling 0K

\*\* Single Phase only

Preliminary data

## Capacity Data

Ambient Temperature: 32°C															
R407C	Cooling Capacity (kW)							R407C	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
Medium Temperature Models															
MC-D8-ZB15KE				1.8*	3.0	3.6	5.1	MC-D8-ZB15KE				1.6*	1.6	1.7	1.8
MC-H8-ZB15KE				1.9*	3.2	3.9	5.6	MC-H8-ZB15KE				1.6*	1.6	1.6	1.7
MC-H8-ZB19KE				2.2*	3.5	4.3	6.3	MC-H8-ZB19KE				1.7*	1.8	1.9	2.0
MC-D8-ZB19KE				2.0*	3.2*	4.0	5.7	MC-D8-ZB19KE				1.7*	1.9*	2.0	2.2
MC-K9-ZB19KE				2.2*	3.5	4.3	6.3	MC-K9-ZB19KE				1.7*	1.8	1.9	2.0
MC-H8-ZB21KE				2.9*	4.6	5.5	7.8	MC-H8-ZB21KE				2.1*	2.3	2.4	2.6
MC-K9-ZB21KE				2.8*	4.6	5.5	7.7	MC-K9-ZB21KE				2.1*	2.3	2.4	2.6
MC-D8-ZB21KE				2.6*	4.0*	4.9*	6.8	MC-D8-ZB21KE				2.2*	2.5*	2.6*	3.0
MC-H8-ZB26KE				3.3*	5.1*	6.3	8.8	MC-H8-ZB26KE				2.5*	2.7*	2.9	3.2
MC-K9-ZB26KE				3.3*	5.1*	6.2	8.7	MC-K9-ZB26KE				2.5*	2.7*	2.9	3.2
MC-M8-ZB30KE				4.2*	6.2*	7.5	10.4	MC-M8-ZB30KE				2.8*	3.2*	3.3	3.7
MC-H8-ZB30KE				4.0*	5.9*	7.1	9.7	MC-H8-ZB30KE				3.0*	3.4*	3.6	4.0
MC-P8-ZB30KE				4.2*	6.3	7.5	10.5	MC-P8-ZB30KE				2.8*	3.1	3.3	3.6
MC-M8-ZB38KE				4.9*	7.5*	9.1	12.3	MC-M8-ZB38KE				3.6*	3.9*	4.2	4.7
MC-H8-ZB38KE					7.0*	8.4*	11.4	MC-H8-ZB38KE					4.3*	4.5*	5.3
MC-P8-ZB38KE				4.9*	7.5*	9.1	12.5	MC-P8-ZB38KE				3.6*	3.9*	4.1	4.6
MC-R7-ZB42KE**				5.7*	8.8	10.5	14.7	MC-R7-ZB42KE**				4.3*	4.6	4.7	4.8
MC-M8-ZB42KE**				5.3*	7.9*	9.4*	13.0	MC-M8-ZB42KE**				4.5*	4.9*	5.1*	5.6
MC-R7-ZB45KE				5.8*	9.1	11.1	15.5	MC-R7-ZB45KE				4.1*	4.5	4.7	5.1
MC-M8-ZB45KE				5.4*	8.2*	9.8*	13.8	MC-M8-ZB45KE				4.3*	4.8*	5.1*	5.9
MC-M9-ZB45KE				5.6*	8.7*	10.7	14.8	MC-M9-ZB45KE				4.2*	4.6*	4.9	5.5
MC-S9-ZB50KE				6.3*	10.5	12.8	17.8	MC-S9-ZB50KE				4.9*	5.2	5.4	6.0
MC-R7-ZB50KE				5.9*	10.0	12.3	17.1	MC-R7-ZB50KE				5.1*	5.5	5.7	6.3
MC-V9-ZB66KE				9.0*	13.8	16.5	23.0	MC-V9-ZB66KE				5.8*	6.4	6.7	7.3
MC-S9-ZB66KE					13.3	15.9	22.0	MC-S9-ZB66KE					6.7	7.1	7.9
MC-V6-ZB76KE				10.4*	16.3	19.7	27.6	MC-V6-ZB76KE				6.9*	7.5	7.7	8.5
MC-V9-ZB76KE				10.0*	15.6	18.7	26.0	MC-V9-ZB76KE				6.9*	7.7	8.1	9.1
MC-W9-ZB114KE				13.6*	22.2	26.9	37.7	MC-W9-ZB114KE				10.7*	11.9	12.5	14.0

Suction Gas Return 20°C / Subcooling 0K

\*Suction Superheat 10K, Subcooling 0K

\*\* Single Phase only

Preliminary data

## Capacity Data

Ambient Temperature: 32°C															
R134a	Cooling Capacity (kW)							R134a	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
Medium Temperature Models															
MC-D8-ZB15KE				1.4	2.2	2.7	3.9	MC-D8-ZB15KE				1.0	1.0	1.1	1.2
MC-H8-ZB15KE				1.4	2.3	2.8	4.1	MC-H8-ZB15KE				1.1	1.1	1.1	1.2
MC-H8-ZB19KE				1.6	2.6	3.2	4.7	MC-H8-ZB19KE				1.2	1.3	1.3	1.4
MC-K9-ZB19KE				1.6	2.6	3.2	4.7	MC-K9-ZB19KE				1.2	1.2	1.3	1.3
MC-D8-ZB19KE				1.6	2.5	3.1	4.4	MC-D8-ZB19KE				1.1	1.2	1.3	1.4
MC-H8-ZB21KE				2.1	3.2	4.0	5.7	MC-H8-ZB21KE				1.5	1.5	1.6	1.7
MC-K9-ZB21KE				2.1	3.2	4.0	5.8	MC-K9-ZB21KE				1.4	1.5	1.6	1.7
MC-D8-ZB21KE				1.9*	3.1	3.7	5.3	MC-D8-ZB21KE				1.4*	1.5	1.6	1.8
MC-H8-ZB26KE				2.3	3.7	4.5	6.5	MC-H8-ZB26KE				1.7	1.8	1.8	2.0
MC-K9-ZB26KE				2.4	3.7	4.5	6.5	MC-K9-ZB26KE				1.6	1.7	1.8	1.9
MC-M8-ZB30KE				2.8	4.4	5.3	7.7	MC-M8-ZB30KE				1.9	2.0	2.0	2.2
MC-P8-ZB30KE				2.8	4.4	5.4	7.8	MC-P8-ZB30KE				1.8	1.9	2.0	2.1
MC-H8-ZB30KE				2.7	4.2	5.2	7.4	MC-H8-ZB30KE				1.9	2.0	2.1	2.3
MC-P8-ZB38KE				3.3	5.4	6.6	9.5	MC-P8-ZB38KE				2.2	2.4	2.5	2.7
MC-M8-ZB38KE				3.3	5.3	6.5	9.3	MC-M8-ZB38KE				2.2	2.4	2.5	2.8
MC-H8-ZB38KE				3.0*	5.1	6.3	8.9	MC-H8-ZB38KE				2.3*	2.6	2.7	3.0
MC-R7-ZB42KE**				3.9	6.1	7.5	10.8	MC-R7-ZB42KE**				2.8	2.9	2.9	2.9
MC-M8-ZB42KE**				3.8	5.9	7.1	10.1	MC-M8-ZB42KE**				2.8	2.9	3.0	3.1
MC-M8-ZB45KE				4.0	6.2	7.6	10.9	MC-M8-ZB45KE				2.7	2.9	3.0	3.3
MC-M9-ZB45KE				4.1	6.4	7.8	11.3	MC-M9-ZB45KE				2.7	2.9	3.0	3.3
MC-R7-ZB45KE				4.2	6.5	8.0	11.6	MC-R7-ZB45KE				2.8	2.9	3.0	3.2
MC-R7-ZB50KE				4.7	7.3	8.9	12.8	MC-R7-ZB50KE				3.4	3.5	3.7	4.0
MC-S9-ZB50KE				4.8	7.5	9.1	13.1	MC-S9-ZB50KE				3.3	3.4	3.5	3.8
MC-S9-ZB58KE				5.3	8.3	10.2	14.6	MC-S9-ZB58KE				3.7	3.8	4.0	4.3
MC-R7-ZB58KE				5.2	8.1	9.9	14.1	MC-R7-ZB58KE				3.8	4.0	4.1	4.5
MC-S9-ZB66KE				6.1	9.4	11.4	16.4	MC-S9-ZB66KE				4.1	4.3	4.5	4.9
MC-V9-ZB66KE				6.2	9.5	11.6	16.7	MC-V9-ZB66KE				4.0	4.2	4.4	4.7
MC-V9-ZB76KE				7.0	10.8	13.1	18.8	MC-V9-ZB76KE				4.7	4.9	5.2	5.6
MC-V6-ZB76KE				7.1	11.1	13.6	19.6	MC-V6-ZB76KE				4.9	5.0	5.2	5.6
MC-V9-ZB95KE				8.3	13.3	16.2	22.9	MC-V9-ZB95KE				5.9	6.4	6.7	7.4
MC-V6-ZB95KE				8.6	13.8	16.9	24.2	MC-V6-ZB95KE				5.9	6.3	6.5	7.1
MC-V6-ZB114KE				9.9	16.1	19.8	28.4	MC-V6-ZB114KE				7.2	7.6	8.0	8.7
MC-W9-ZB114KE				9.9	16.2	20.0	28.7	MC-W9-ZB114KE				7.1	7.6	7.9	8.6
Digital Medium Temperature Models															
MC-M8-ZBD30				2.9	4.5	5.4	7.6	MC-M8-ZBD30				1.8	2.0	2.1	2.4
MC-M9-ZBD45				3.9*	6.4	7.7	11.0	MC-M9-ZBD45				2.6*	3.0	3.1	3.5
MC-V6-ZBDT60				5.8	9.1	11.1	16.0	MC-V6-ZBDT60				3.9	4.1	4.3	4.6
MC-V6-ZBDT90				8.4	13.0	15.9	22.9	MC-V6-ZBDT90				5.2	5.7	6.0	6.6

Suction Gas Return 20°C / Subcooling 0K

\*Suction Superheat 10K, Subcooling 0K

\*\* Single Phase only

Preliminary data

## Capacity Data

Ambient Temperature: 32°C															
R450A	Cooling Capacity (kW)							R450A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
<b>Medium Temperature Models</b>															
MC-D8-ZB15KE				1.2	1.9	2.4	3.5	MC-D8-ZB15KE				0.9	0.9	0.9	0.9
MC-H8-ZB15KE				1.2	2.0	2.5	3.7	MC-H8-ZB15KE				1.0	1.0	1.0	1.0
MC-D8-ZB19KE				1.4	2.2	2.7	4.0	MC-D8-ZB19KE				1.1	1.1	1.1	1.2
MC-H8-ZB19KE				1.4	2.3	2.8	4.2	MC-H8-ZB19KE				1.1	1.1	1.1	1.2
MC-K9-ZB19KE				1.4	2.3	2.8	4.2	MC-K9-ZB19KE				1.1	1.1	1.1	1.2
MC-D8-ZB21KE				1.6*	2.8	3.4	4.9	MC-D8-ZB21KE				1.3*	1.3	1.4	1.5
MC-H8-ZB21KE				1.8	2.9	3.6	5.3	MC-H8-ZB21KE				1.3	1.4	1.4	1.4
MC-K9-ZB21KE				1.8	2.9	3.6	5.3	MC-K9-ZB21KE				1.3	1.3	1.3	1.4
MC-H8-ZB26KE				2.1	3.3	4.1	6.0	MC-H8-ZB26KE				1.5	1.6	1.6	1.7
MC-K9-ZB26KE				2.1	3.3	4.1	6.0	MC-K9-ZB26KE				1.5	1.5	1.6	1.7
MC-H8-ZB30KE				2.4	3.8	4.7	6.9	MC-H8-ZB30KE				1.8	1.8	1.8	1.9
MC-M8-ZB30KE				2.4	3.9	4.9	7.1	MC-M8-ZB30KE				1.7	1.7	1.8	1.8
MC-P8-ZB30KE				2.5	4.0	4.9	7.2	MC-P8-ZB30KE				1.7	1.7	1.7	1.8
MC-H9-ZB38KE				2.7*	4.6	5.7	8.2	MC-H9-ZB38KE				2.2*	2.3	2.4	2.6
MC-M8-ZB38KE				3.0	4.8	5.9	8.6	MC-M8-ZB38KE				2.1	2.2	2.2	2.4
MC-P8-ZB38KE				3.0	4.8	6.0	8.7	MC-P8-ZB38KE				2.1	2.1	2.2	2.3
MC-M8-ZB42KE**				3.3	5.3	6.5	9.4	MC-M8-ZB42KE**				2.4	2.5	2.5	2.7
MC-R7-ZB42KE**				3.4	5.5	6.8	10.0	MC-R7-ZB42KE**				2.5	2.5	2.6	2.7
MC-M8-ZB45KE				3.5	5.5	6.8	9.8	MC-M8-ZB45KE				2.5	2.5	2.6	2.8
MC-M9-ZB45KE				3.5	5.7	7.0	10.2	MC-M9-ZB45KE				2.6	2.6	2.7	2.8
MC-R7-ZB45KE				3.6	5.8	7.1	10.5	MC-R7-ZB45KE				2.6	2.6	2.7	2.8
MC-R7-ZB58KE				4.5	7.2	8.8	12.7	MC-R7-ZB58KE				3.3	3.6	3.8	4.1
MC-S9-ZB58KE				4.6	7.3	8.9	13.0	MC-S9-ZB58KE				3.3	3.5	3.7	4.0
MC-S9-ZB66KE				5.1	8.1	9.9	14.4	MC-S9-ZB66KE				3.6	3.9	4.1	4.5
MC-V9-ZB66KE				5.2	8.2	10.1	14.6	MC-V9-ZB66KE				3.6	3.9	4.0	4.4
MC-V6-ZB76KE				6.0	9.7	11.9	17.4	MC-V6-ZB76KE				4.4	4.7	4.9	5.2
MC-V9-ZB76KE				5.9	9.4	11.6	16.9	MC-V9-ZB76KE				4.1	4.5	4.7	5.2
MC-V6-ZB95KE				7.3	11.8	14.5	21.3	MC-V6-ZB95KE				5.4	5.7	6.0	6.7
MC-V9-ZB95KE				7.1	11.3	14.0	20.3	MC-V9-ZB95KE				5.3	5.7	6.0	6.8
MC-V6-ZB114KE				8.4	13.8	17.0	24.8	MC-V6-ZB114KE				6.5	7.0	7.3	8.1
MC-W9-ZB114KE				8.5	13.8	17.1	25.0	MC-W9-ZB114KE				6.5	7.0	7.3	8.0
<b>Digital Medium Temperature Models</b>															
MC-M8-ZBD30				2.5	4.0	4.9	7.1	MC-M8-ZBD30				1.5	1.7	1.8	2.0
MC-M9-ZBD45				3.6	5.8	7.1	10.2	MC-M9-ZBD45				2.3	2.6	2.7	3.0
MC-V6-ZBDT60				5.0	8.1	10.1	14.8	MC-V6-ZBDT60				3.5	3.6	3.7	4.0
MC-V6-ZBDT90				7.3	11.6	14.3	21.0	MC-V6-ZBDT90				4.8	5.1	5.2	5.7

Suction Gas Return 20°C / Subcooling 0K

\* Suction Superheat 10K, Subcooling 0K

\*\* Single Phase only

Preliminary data

## Capacity Data

Ambient Temperature: 32°C															
R513A	Cooling Capacity (kW)							R513A	Power Input (kW)						
	Evaporating Temperature (°C)								Evaporating Temperature (°C)						
	-45	-35	-30	-20	-10	-5	+5		-45	-35	-30	-20	-10	-5	+5
<b>Medium Temperature Models</b>															
MC-D8-ZB15KE				1.4	2.3	2.8	4.0	MC-D8-ZB15KE				1.1	1.1	1.1	1.1
MC-H8-ZB15KE				1.5	2.4	2.9	4.2	MC-H8-ZB15KE				1.1	1.1	1.1	1.1
MC-D8-ZB19KE				1.6*	2.6	3.2	4.4	MC-D8-ZB19KE				1.2*	1.3	1.3	1.4
MC-H8-ZB19KE				1.8	2.8	3.3	4.8	MC-H8-ZB19KE				1.3	1.3	1.3	1.4
MC-K9-ZB19KE				1.8	2.8	3.4	4.8	MC-K9-ZB19KE				1.3	1.3	1.3	1.4
MC-D8-ZB21KE				2.0*	3.3	3.9	5.3	MC-D8-ZB21KE				1.5*	1.6	1.7	1.8
MC-H8-ZB21KE				2.3	3.5	4.2	5.9	MC-H8-ZB21KE				1.5	1.6	1.6	1.7
MC-K9-ZB21KE				2.3	3.5	4.2	5.9	MC-K9-ZB21KE				1.5	1.6	1.6	1.7
MC-H8-ZB26KE				2.5	3.9	4.7	6.8	MC-H8-ZB26KE				1.8	1.9	1.9	2.0
MC-K9-ZB26KE				2.5	3.9	4.8	6.8	MC-K9-ZB26KE				1.8	1.8	1.9	2.0
MC-H8-ZB30KE				2.7*	4.5	5.5	7.8	MC-H8-ZB30KE				2.0*	2.1	2.2	2.4
MC-M8-ZB30KE				3.0	4.6	5.7	8.2	MC-M8-ZB30KE				2.0	2.0	2.1	2.2
MC-P8-ZB30KE				3.0	4.7	5.8	8.3	MC-P8-ZB30KE				1.9	2.0	2.0	2.1
MC-H9-ZB38KE				3.2*	5.4	6.5	9.2	MC-H9-ZB38KE				2.6*	2.8	2.9	3.1
MC-M8-ZB38KE				3.4*	5.6	6.8	9.7	MC-M8-ZB38KE				2.5*	2.6	2.7	2.9
MC-P8-ZB38KE				3.7	5.7	7.0	10.0	MC-P8-ZB38KE				2.5	2.6	2.6	2.8
MC-M8-ZB42KE**				3.7*	6.2	7.6	10.7	MC-M8-ZB42KE**				2.8*	3.0	3.1	3.3
MC-R7-ZB42KE**				4.2	6.6	8.0	11.5	MC-R7-ZB42KE**				2.9	3.0	3.0	3.2
MC-M8-ZB45KE				3.9*	6.5	7.8	11.1	MC-M8-ZB45KE				2.9*	3.1	3.2	3.4
MC-M9-ZB45KE				4.3	6.7	8.1	11.6	MC-M9-ZB45KE				3.0	3.1	3.2	3.4
MC-R7-ZB45KE				4.4	6.8	8.3	12.0	MC-R7-ZB45KE				3.0	3.1	3.1	3.3
MC-R7-ZB58KE				5.5	8.4	10.2	14.4	MC-R7-ZB58KE				3.9	4.1	4.3	4.7
MC-S9-ZB58KE				5.5	8.6	10.5	14.9	MC-S9-ZB58KE				3.9	4.0	4.1	4.5
MC-S9-ZB66KE				6.2	9.6	11.6	16.4	MC-S9-ZB66KE				4.3	4.5	4.7	5.1
MC-V9-ZB66KE				6.3	9.7	11.8	16.8	MC-V9-ZB66KE				4.3	4.4	4.5	4.9
MC-V6-ZB76KE				7.4	11.5	14.0	20.2	MC-V6-ZB76KE				5.1	5.3	5.5	5.8
MC-V9-ZB76KE				7.2	11.2	13.6	19.3	MC-V9-ZB76KE				4.9	5.2	5.4	5.9
MC-V6-ZB95KE				8.9	14.0	17.1	24.3	MC-V6-ZB95KE				6.4	6.7	6.9	7.4
MC-V9-ZB95KE				8.6	13.4	16.2	22.8	MC-V9-ZB95KE				6.3	6.8	7.1	7.8
MC-V6-ZB114KE				10.1	16.3	19.9	28.1	MC-V6-ZB114KE				7.8	8.2	8.5	9.1
MC-W9-ZB114KE				10.2	16.4	20.0	28.3	MC-W9-ZB114KE				7.7	8.2	8.4	9.0
MC-V6-ZB114KE			10.2					MC-V6-ZB114KE							
<b>Digital Medium Temperature Models</b>															
MC-M8-ZBD30				3.0	4.7	5.7	8.1	MC-M8-ZBD30				1.8	2.0	2.1	2.3
MC-M9-ZBD45				4.4	6.8	8.2	11.6	MC-M9-ZBD45				2.7	3.0	3.2	3.6
MC-V6-ZBDT60				6.2	9.6	11.9	17.2	MC-V6-ZBDT60				4.0	4.2	4.3	4.6
MC-V6-ZBDT90				8.8	13.7	16.8	24.0	MC-V6-ZBDT90				5.6	6.0	6.2	6.7

Suction Gas Return 20°C / Subcooling 0K

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