



# KIRBY® FRIDGEBOX

## Condensing Units

World class technology  
packaged in a flexible design



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# KIRBY FRIDGEBOX

## Condensing Units

### Introduction

The Kirby® Fridgebox range of condensing units builds on Kirby's reputation of extremely durable, low maintenance refrigeration products. Built on a compact and highly flexible platform, the Kirby Fridgebox range includes features such as indoor or outdoor installation, side discharge fans and dual pressure controls.

Kirby® Fridgebox Series IV includes Copeland's latest generation of scroll compressors, lowering noise and vibration while delivering optimum performance across a wide range of ambient conditions. Additionally, Kirby Digital Scroll Fridgebox™ include Copeland Scroll Digital compressors matched which achieve best in class capacity and close temperature modulation, excellent COP's and system efficiency.

### Features & Benefits

The Kirby® Fridgebox range of condensing units offer premium inclusions and are install ready:

- Latest generation Copeland ZB compressors offer reduced noise, increased durability and reliability.
- High efficiency Hypercore™ microchannel condenser coil technology boosts efficiency and reduces refrigerant charge requirements, lessening environmental impact.
- Pre-wired MP15 protection saves time and simplifies commissioning.
- Engineered for harsh Australian conditions, with guaranteed operation up to 45°C ambient temperature.
- Removable panels offer each access for service and maintenance.
- Compact footprint and light weight provides flexibility in selecting installation location, while also making installation easy.
- Dixell XC controller ensures optimal performance of digital scroll compressors\*

\* Kirby Digital Scroll Fridgebox models only

### Kirby® Fridgebox Condensing Units – Nomenclatures

<b>FB</b>	<b>H</b>	<b>116</b>	<b>MH</b>	<b>Z</b>	<b>1</b>	<b>2</b>
<b>Primary Refrigerant Capacity</b> (kW) x 10			<b>Compressor Power Supply</b>			
<b>Compressor Type</b> H Hermetic DH Digital Hermetic			<b>Variation Number</b>			1 Single Phase 2 Three Phase
<b>Product Brand</b> FB Fridgebox			<b>Coil Type</b> Z Air Cooled Microchannel Coil			
			<b>Operation Range for Primary Refrigerant</b>			
			MH Medium / High			
			LM Low / Medium			
			L Low			

## FRIDGEBOX CONDENSING UNITS

### R404A Medium Temperature Performance Data

PRODUCT NUMBER	DISPLACEMENT (m <sup>3</sup> /hr)	AMBIENT TEMP. (°C)	CAPACITY WATTS @ SST (°C)										RECEIVER CAPACITY (kg)
			LT				MT			HT			
			-35	-30	-25	-20	-15	-10	-5	0	5	10	
<b>EMERSON COPELAND SCROLL COMPRESSORS</b>													
FBH043MHZ1-2	5.90	35	-	1,450	1,860	2,340	2,870	3,440	4,050	4,710	5,420	6,180	6.8
		43	-	1,160	1,530	1,950	2,410	2,910	3,450	4,030	4,640	5,280	
FBH051MHZ1-2	6.80	35	-	2,000	2,430	2,940	3,500	4,130	4,820	5,580	6,420	7,330	6.8
		43	-	-	2,110	2,550	3,040	3,590	4,200	4,870	5,610	6,400	
FBH066MHZ1-2	8.60	35	-	2,480	3,050	3,720	4,490	5,360	6,330	7,400	8,580	9,880	8.9
		43	-	2,160	2,660	3,250	3,920	4,670	5,510	6,440	7,470	8,590	
FBH075MHZ1-2	9.90	35	-	2,880	3,520	4,270	5,130	6,090	7,180	8,380	9,710	11,180	8.9
		43	-	2,500	3,060	3,720	4,470	5,310	6,260	7,320	8,490	9,790	
FBH086MHZ1-2	11.60	35	-	3,300	4,040	4,910	5,890	7,000	8,230	9,580	11,060	12,680	8.9
		40	-	3,020	3,700	4,500	5,400	6,410	7,550	8,810	10,200	11,700	
FBH103MHZ1-2	14.50	35	-	4,050	4,940	5,950	7,110	8,390	9,800	11,340	12,990	14,750	8.9
		40	-	3,730	4,540	5,470	6,520	7,700	9,000	10,420	11,950	13,570	
FBH116MHZ1-2	17.20	35	-	4,650	5,680	6,850	8,160	9,580	11,110	12,750	14,510	16,390	8.9
		43	-	-	4,870	5,930	7,100	8,350	9,700	11,110	12,600	-	

## FRIDGEBOX CONDENSING UNITS

### R134a Medium Temperature Performance Data

PRODUCT NUMBER	DISPLACEMENT (m <sup>3</sup> /hr)	AMBIENT TEMP. (°C)	CAPACITY WATTS @ SST (°C)										RECEIVER CAPACITY (kg)
			LT				MT			HT			
			-35	-30	-25	-20	-15	-10	-5	0	5	10	
FBH043MHZ1-2	5.90	35	-	-	-	1,490	1,870	2,310	2,820	3,400	4,030	4,710	7.8
		46	-	-	-	-	-	2,040	2,500	3,020	3,590	4,210	
FBH051MHZ1-2	6.80	35	-	-	-	1,570	2,010	2,530	3,150	3,840	4,600	5,370	7.8
		46	-	-	-	-	-	2,290	2,840	3,480	4,160	4,860	
FBH066MHZ1-2	8.60	35	-	-	-	2,190	2,740	3,400	4,170	5,040	6,020	7,100	10.4
		46	-	-	-	-	2,480	3,080	3,790	4,590	5,480	6,450	
FBH075MHZ1-2	9.90	35	-	-	-	2,180	2,820	3,570	4,440	5,420	6,480	7,600	10.4
		46	-	-	-	-	2,460	3,170	3,980	4,890	5,880	6,930	
FBH086MHZ1-2	11.60	35	-	-	-	2,900	3,660	4,550	5,570	6,710	7,960	9,300	10.4
		46	-	-	-	-	-	4,090	5,020	6,060	7,200	8,420	
FBH103MHZ1-2	14.50	35	-	-	-	3,480	4,430	5,530	6,760	8,110	9,580	11,170	11.4
		46	-	-	-	-	-	5,020	6,140	7,360	8,690	10,120	
FBH116MHZ1-2	17.20	35	-	-	-	4,220	5,250	6,460	7,850	9,380	11,040	12,820	10.4
		46	-	-	-	-	-	5,760	7,000	8,380	9,890	11,500	

# FRIDGEBOX CONDENSING UNITS

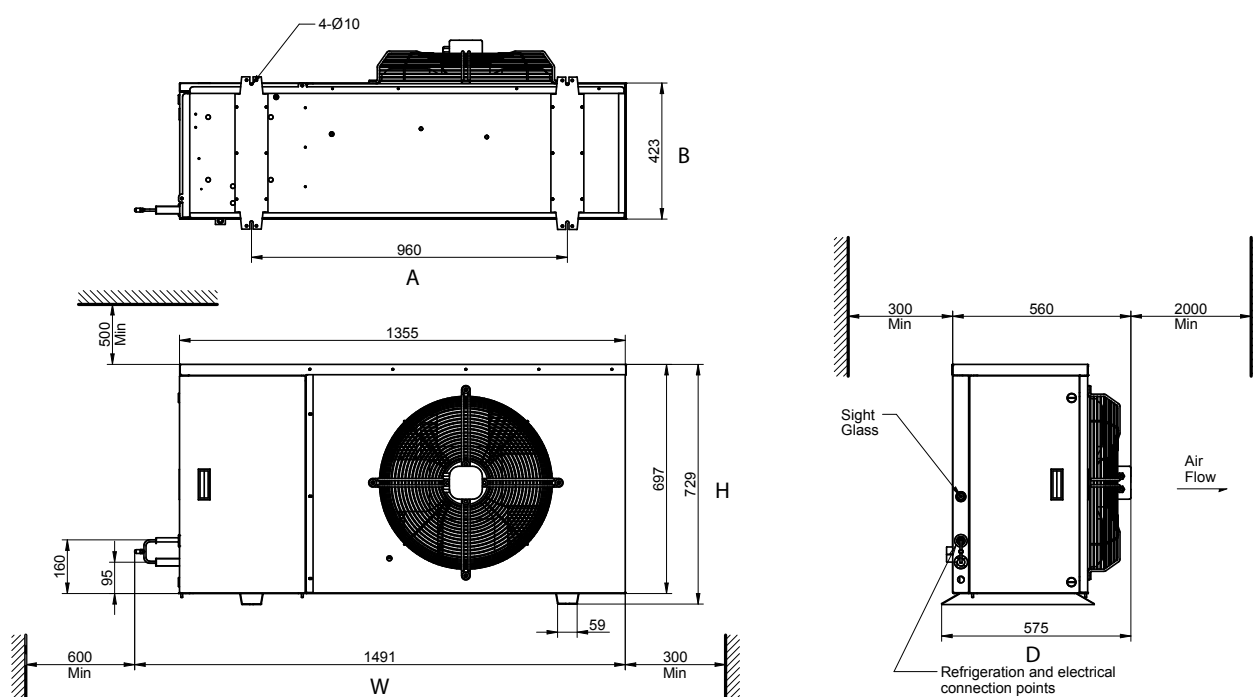
## Technical Data

PRODUCT NUMBER	COMPRESSOR MODEL	CONDENSER FAN DATA			ELECTRICAL DATA				CONNECTIONS		SOUND DATA			
		NO. OF FANS (#)	DIAMETER (mm)	AIRFLOW (l/s)	MCC (A/Ph)	LRA (A/Ph)	RLA (A/Ph)	INPUT (W)	LIQUID (mm)	SUCTION (mm)	100% FAN SPEED		60% FAN SPEED	
											LwA	LpA 3m	LwA	LpA 3m
<b>EMERSON COPELAND SCROLL COMPRESSORS</b>														
FBH043MHZ1-2	ZB15KQE-TFD	2	350	1,010	6.5	27.6	4.8	2,120	12.7	19.0	76.4	55.9	69.7	49.2
FBH051MHZ1-2	ZB19KQE-TFD	2	350	1,010	8.1	33.6	5.8	2,440	12.7	19.0	76.4	55.9	69.7	49.2
FBH066MHZ1-2	ZB21KQE-TFD	1	500	1,910	9.2	42.0	7.0	2,970	12.7	19.0	79.8	59.3	72.9	52.4
FBH075MHZ1-2	ZB26KQE-TFD	1	500	1,910	10.9	48.0	7.8	3,400	12.7	19.0	79.8	59.3	72.9	52.4
FBH086MHZ1-2	ZB30KQE-TFD	1	500	1,910	12.3	51.3	9.4	3,790	12.7	22.2	79.9	59.4	73.6	53.1
FBH103MHZ1-2	ZB38KQE-TFD	1	500	1,910	14.8	67.5	11.3	4,670	12.7	22.2	80.2	59.7	75.1	54.6
FBH116MHZ1-2	ZB45KQE-TFD	1	500	1,910	15.1	76.0	11.5	5,260	12.7	22.2	80.3	59.8	75.9	55.4

# FRIDGEBOX CONDENSING UNITS

## Physical Data

PRODUCT NUMBER	DIMENSIONS (mm)					WEIGHT (kg)	
	HEIGHT	WIDTH	DEPTH	A	B	NET	GROSS
<b>EMERSON COPELAND SCROLL COMPRESSORS</b>							
FBH043MHZ1-2	569	1,414	560	900	423	84	99
FBH051MHZ1-2	569	1,414	560	900	423	86	101
FBH066MHZ1-2	729	1,491	575	960	423	83	103
FBH075MHZ1-2	729	1,491	575	960	423	84	104
FBH086MHZ1-2	729	1,491	575	960	423	93	113
FBH103MHZ1-2	729	1,491	575	960	423	94	114
FBH116MHZ1-2	729	1,491	575	960	423	96	116



## DIGITAL SCROLL FRIDGEBOX CONDENSING UNITS

### R404A Medium Temperature Performance Data

PRODUCT NUMBER	DISPLACEMENT (m <sup>3</sup> /hr)	AMBIENT TEMP. (°C)	CAPACITY WATTS @ SST (°C)									RECEIVER CAPACITY (kg)	
			LT				MT			HT			
			-35	-30	-25	-20	-15	-10	-5	0	5		10
<b>EMERSON COPELAND SCROLL DIGITAL COMPRESSORS</b>													
FBDH066MHZ1-2	5.92	35	-	-	-	3,760	4,500	5,390	6,390	7,470	8,600	9,760	8.9
		45	-	-	-	-	4,000	4,780	5,580	6,400	7,250	8,160	
FBDH088MHZ1-2	6.81	35	-	-	-	5,040	5,970	7,030	8,220	9,530	10,930	12,380	8.9
		45	-	-	-	-	5,110	5,980	6,930	7,950	9,040	10,170	
FBDH116MHZ1-2	9.90	35	-	-	-	7,160	8,380	9,790	11,390	13,110	14,860	16,540	8.9
		45	-	-	-	-	7,230	8,410	9,750	11,210	12,680	-	
FBDH125MHZ1-2	11.60	35	-	-	-	7,680	8,930	10,370	11,970	13,670	15,340	16,870	8.9
		45	-	-	-	-	-	8,790	10,080	11,450	-	-	

## DIGITAL SCROLL FRIDGEBOX CONDENSING UNITS

### R134a Medium Temperature Performance Data

PRODUCT NUMBER	DISPLACEMENT (m <sup>3</sup> /hr)	AMBIENT TEMP. (°C)	CAPACITY WATTS @ SST (°C)									RECEIVER CAPACITY (kg)	
			LT				MT			HT			
			-35	-30	-25	-20	-15	-10	-5	0	5		10
<b>EMERSON COPELAND SCROLL DIGITAL COMPRESSORS</b>													
FBDH066MHZ1-2	5.92	35	-	-	-	2,150	2,700	3,320	4,020	4,820	5,740	6,790	10.4
		46	-	-	-	1,970	2,480	3,030	3,640	4,340	5,150	6,070	
FBDH088MHZ1-2	6.81	35	-	-	-	2,650	3,350	4,180	5,150	6,250	7,490	8,860	10.4
		46	-	-	-	2,350	2,970	3,720	4,590	5,580	6,690	7,920	
FBDH116MHZ1-2	9.90	35	-	-	-	4,000	5,000	6,150	7,460	8,940	10,600	12,430	10.4
		46	-	-	-	-	4,450	5,470	6,640	7,970	9,450	11,090	
FBDH125MHZ1-2	11.60	35	-	-	-	4,460	5,520	6,770	8,200	9,800	11,560	13,480	10.4
		46	-	-	-	-	-	6,040	7,300	8,700	10,240	11,930	

# DIGITAL SCROLL FRIDGEBOX CONDENSING UNITS

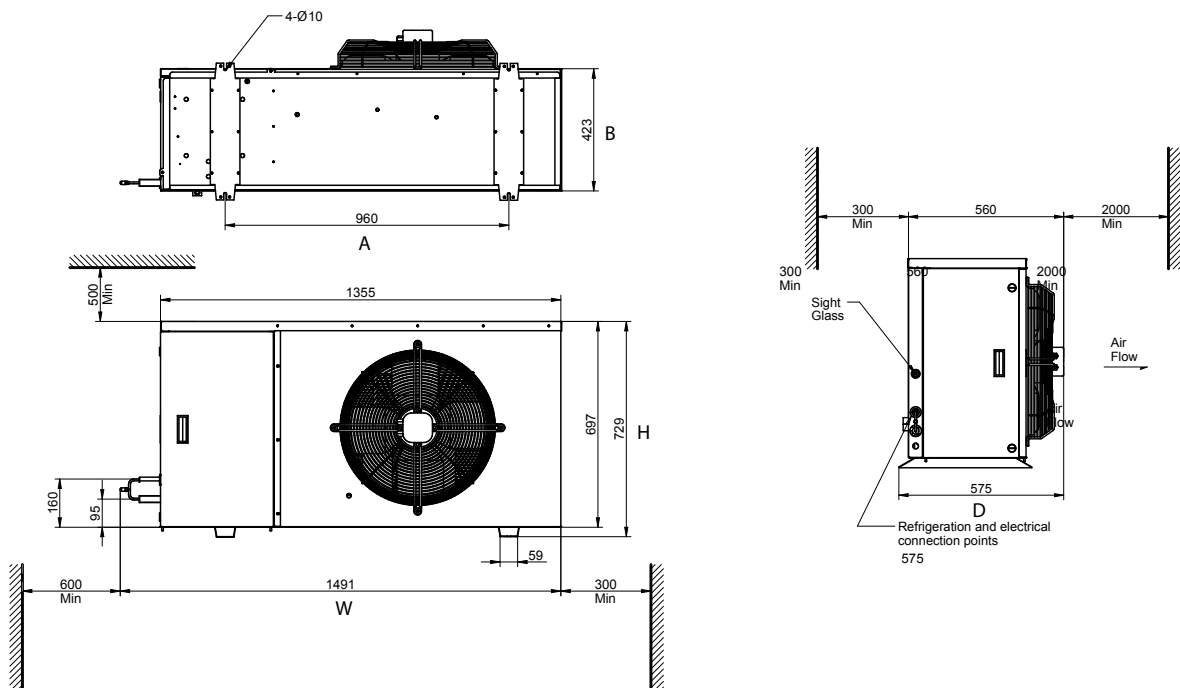
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PRODUCT NUMBER	COMPRESSOR MODEL	CONDENSER FAN DATA			ELECTRICAL DATA				CONNECTIONS		SOUND DATA			
		NO. OF FANS (#)	DIAMETER (mm)	AIRFLOW (l/s)	MCC (A/Ph)	LRA (A/Ph)	RLA (A/Ph)	INPUT (W)	LIQUID (mm)	SUCTION (mm)	100% FAN SPEED		60% FAN SPEED	
											LwA	LpA 3m	LwA	LpA 3m
<b>EMERSON COPELAND SCROLL DIGITAL COMPRESSORS</b>														
FBDH066MHZ1-2	ZBD21KCE-TFD	1	500	470	8.7	42.0	6.4	2,800	12.7	19.0	79.8	59.8	72.9	52.9
FBDH088MHZ1-2	ZBD29KQE-TFD	1	500	470	9.9	50.0	7.6	3,620	12.7	19.0	79.7	59.7	71.7	51.7
FBDH116MHZ1-2	ZBD45KQE-TFD	1	500	470	13.4	76.0	10.8	5,400	12.7	22.2	81.7	61.7	80.4	60.4
FBDH125MHZ1-2	ZBD48KQE-TFD	1	500	470	16.0	102.0	12.4	5,880	12.7	22.2	81.7	61.7	80.4	60.4

# DIGITAL SCROLL FRIDGEBOX CONDENSING UNITS

## Physical Data

PRODUCT NUMBER	DIMENSIONS (mm)					WEIGHT (kg)	
	HEIGHT	WIDTH	DEPTH	A	B	NET	GROSS
<b>EMERSON COPELAND SCROLL DIGITAL COMPRESSORS</b>							
FBDH066MHZ1-2	729	1,491	575	960	423	83	103
FBDH088MHZ1-2	729	1,491	575	960	423	93	113
FBDH103MHZ1-2	729	1,491	575	960	423	94	114
FBDH116MHZ1-2	729	1,491	575	960	423	96	116
FBDH125MHZ1-2	729	1,491	575	960	423	97	117







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