



COMMERCIAL REFRIGERATION LINE

# FMCU-S SERIES, A.1

## MEDIUM-SIZED CONDENSING UNIT

STANDARD SERIES, AIR COOLED CONDENSER

SINGLE, DUAL OR TRIPLE SEMI-HERMETIC COMPRESSOR(S) / 27 - 69 HP

27 - 69 HP 

The FMCU-S: FriconUSA Medium-Sized Condensing Unit, Standard series, air cooled condenser, is built with the best components in the market including Bitzer semi-hermetic compressors; available in capacities from 27 to 69 HP in configurations of a single compressor, or dual and triple parallel compressors. The high quality and efficiency of our products allow us to ensure our clients a highly reliable operation, low energy consumption and long equipment service life.

The most common commercial refrigeration applications are centralized refrigeration for small and medium-sized supermarkets, cold rooms, blast coolers or freezers, continuous rapid cooling tunnels, block or flake ice making machines, thermal ice storage, etc.

By using Bitzer Ecoline semi-hermetic compressors with infinite variable capacity control "CRII" between 10% and 100% we convert this condensing unit into an incredible VRF (Variable Refrigerant Flow) resulting in a greater adaptability to the thermal load demand and maximizes energy savings at partial load.

Application Temperature:

"M" Medium: +35°F (+1.7°C) to 0°F (-18.0°C)

"L" Low: 0°F (-18.0°C) to -40°F (-40°C)



10% **VRF** 100%  
 VARIABLE REFRIGERANT FLOW  
 VARIABLE REFRIGERANT FLOW "LOOP"  
 Optional



## STANDARD FEATURES & BENEFITS:

- Bitzer Ecoline semi-hermetic compressor(s) with spring mounted vibration insulation, crankcase heater and internal thermal protection.
- Aluminum structure with galvanized steel reinforcement, high efficiency condenser with reinforced structure and aluminum micro-channel coils. Its low weight and size reduces the costs of transportation, installation and construction.
- Galvanized, powder coated, acoustically semi-insulated and weatherproof semi-enclosed compressor cabin.
- EcoFriendly; Air cooled micro-channel condenser coil with internal volume reduced requires between 40% and 60% less refrigerant charge and results in a significant reduction of the refrigerant charge necessary for normal or flooded operations.
- Wide range of SST (Saturated Suction Temperature).
- Quiet, high efficiency, external rotor motor, AC type axial fan(s) for a better operation.
- Horizontal liquid receiver with inlet and outlet insulate valves, stainless steel relief valve at 450 PSI.
- Suction filter and liquid drier with replaceable core.
- Flexible joint on suction and discharge lines on each compressor.
- Helical oil separator with discharge check valve, replaceable 5 micron oil filter and built-in oil reservoir for units with dual or triple compressors.
- Electronic oil level regulator for units with dual or triple compressors.
- Electronic oil pressure switch.
- Refrigerant: R-404a
- Factory pre-charged with nitrogen and electrical work tested.
- UL 508A listed built-in electrical control panel.
- Compressor and fan circuit breakers.
- Voltage and phase-loss monitor for each compressor.
- Control: 208-230V / 1PH / 60HZ
- Power Supply Voltage 460V / 3PH / 60HZ with single point power connection.
- Electronic Control System; compressor(s) and condenser fan(s) operational management: alarms, measurement of pressure and temperature variables, 132x64 LCD backlit built-in display with 6-button keypad.
- Alarm management: 1 general alarm for compressor(s) and 1 overload alarm for condenser fan(s).
- Fixed high pressure controls on each compressor.
- BMS (Building Management System): ModBus protocol for supervisor or HMI (Human Machine Interface).
- 1-year warranty.

## STANDARD OPTIONS:

- Different compressor brand.
- Condenser coil with E-Coating for greater resistance to corrosion.
- Protective mesh for the condenser.
- EC type fans with variable speed (for 575V a VFD is used).
- Refrigerants: R-407a, R-407c, R-448a, R-449a, R-507a
- Different power supply voltage.

For an even more efficient unit,  
ask about our Premium Series!



## ADDITIONAL OPTIONS:

- Electric unloader for compressor: one step for 4 cylinders (50-100%) or two steps for 6 cylinders (33-66-100%).
- VRF (Variable Refrigerant Flow) package to maximize the efficiency and capacity adaptability to the demand:
  - VRF-I: CRII Unloader. Infinite capacity control on the first compressor (4 cylinders: 10≈100%, 6 cylinders: 33≈100%).
- FECC (Fully Enclosed Compressor Cabin) package for better soundproofing:
  - FECC-I: Fully enclosed metal compressor cabin.
  - FECC-II: Same as FECC-I with internal convoluted acoustic foam panel lining.
- LAHPC (Low Ambient Head Pressure Control). Required for ambient temperature operation below +40°F. Note: variable speed EC fans are recommended.
  - LAHPC-I: +110°F (+43.3°C) to 0 °F (-18°C), Includes: Sporlan head pressure control valves ORI & ORD.
- HAOP (High Ambient Operation Package) required for operation above +110°F:
  - HAOP-I: +125°F (+51.7°C) to +40°F (4.4°C), includes: air exhaust duct to the condenser plenum for cooling of the control panel and filter for the air inlet.
- Electronic low liquid level indicator.
- Suction accumulator.
- Suction accumulator with heat exchanger.
- Liquid sight glass and solenoid valve.
- Helical oil separator with discharge check valve and replaceable 5 micron oil filter for single compressor units.
- MDS (Main Disconnect Switch).
- Electronic Control System:
  - BACnet Communication board.
  - Remote LCD display.
  - Local or remote touch screen display.
- Extended 5-year warranty on the compressor (U.S. only).

## BENEFITS:

**Variable Refrigerant Flow (VRF):** Maximum adaptability to the thermal load demand and extraordinary energy savings at partial load.

**Easy access:** Doors (front and sides) with nylon hinges and locks with a universal key allow for a secure, quick and easy access to the control panel, compressor(s) and other system components without having to remove screws.

**Easy maintenance:** The horizontal liquid receiver, filters, liquid solenoid and sight glass are secured on the sides of the unit with sufficient space for service ensuring better condenser cleaning.

**Waterproof:** Compressor cabinet and electrical control panel located on the front of the unit and are designed to operate outdoors.

**Less space:** Because we use high efficiency "V"-shaped with micro-channel condenser coils with vertical air discharge and a strong but lightweight aluminum structure our FMCU occupy less space compared to similar equipment on the market, significantly reducing the need for costly wasted space in mechanical rooms or mezzanines.

**Cost effective:** The dual or triple FMCU's are a parallel system, with 2 or 3 compressors respectively, with all the components necessary to operate a suction group as efficiently as a conventional parallel "Rack" system but at a lower cost.

**Quiet operation:** Using external rotor motors fan(s) with cast aluminum curved wing impeller, optimized venturi plate offers high performance air volume, low energy consumption and noise reduction; combined with an acoustically isolated compressor cabin permits a quiet operation.

REFERENCE

- 1. Compressor(s)
- 2. Micro-channel condenser
- 3. Fan(s)
- 4. Electrical control panel
- 5. Liquid receiver
- 6. Oil separator
- 7. Liquid drier(s)
- 8. Suction filters
- 9. Electronic oil regulator
- 10. Service doors
- 11. Mesh protection (optional)



Single Compressor



Dual Compressors



Triple Compressors

NOMENCLATURE

<b>MODEL</b>										
<b>F:</b> FRICONUSA	<b>FMCU</b>	<b>S</b>	<b>A.1</b>	<b>M</b>	<b>0300</b>	<b>S</b>	<b>1</b>	<b>1</b>	<b>44</b>	<b>2</b>
<b>M:</b> MEDIUM-SIZED										
<b>C:</b> CONDENSING										
<b>U:</b> UNIT										
<b>SERIES</b> S: STANDARD										
<b>CONDENSER TYPE &amp; VERSION</b> A: AIR COOLED, 1: VERSION 1										
<b>APPLICATIONS TEMPERATURE</b> M: MEDIUM/LOW: +35°F (-1.7°C) TO 0°F (-18.0°C) SST. L: LOW: +0°F (-18.0°C) TO -40°F (-40°C) SST.										
<b>SIZE / CAPACITY</b> SEE TECHNICAL DATA TABLE FOR SELECTION										
<b>CHARACTERISTIC</b> S: SINGLE      D: DUAL      T: TRIPLE										
					<b>VOLTAGE</b>					
					1: 208-230V / 3PH / 60HZ		5: 380V / 3PH / 50HZ			
					2: 460V / 3PH / 60HZ		9: 380V / 3PH / 60HZ			
					3: 575V / 3PH / 60HZ		S: SPECIAL VOLTAGE			
					4: 220V / 3PH / 50HZ					
					<b>REFRIGERANT</b>					
					13: R-134A <sup>†</sup>		47: R-407C		57: R-507A	
					44: R-404A		48: R-448A		SR: SPECIAL REFRIGERANT	
					46: R-407A		49: R-449A			
					<sup>†</sup> VALID ONLY FOR LOW TEMP. UNITS - NOTE: LOW TEMP. UNITS WITH R-134A CONVERT TO HIGH TEMP.					
					<b>CONDENSER, PROTECTION OPTION &amp; FAN TYPE</b>					
					1: MCHX & AC FAN		6: MCHX WITH E-COATING, MESH PROTECTION & AC FAN			
					2: MCHX WITH E-COATING & AC FAN		7: MCHX WITH MESH PROTECTION & EC FAN			
					3: MCHX & EC FAN		8: MCHX WITH E-COATING, MESH PROTECTION & EC FAN			
					4: MCHX WITH E-COATING & EC FAN		5: MCHX WITH MESH PROTECTION & AC FAN			
					<small>MCHX: MICRO-CHANNEL CONDENSER</small>					
					<b>COMPRESSOR BRAND &amp; TYPE</b>					
					1: BITZER SEMI-HERMETIC		S: SPECIAL COMPRESSOR			



TECHNICAL DATA - APPLICATION TEMPERATURE

Performance based on Bitzer EcoLine Compressor

SINGLE SEMI-HERMETIC COMPRESSOR

R-404a

MODEL		COMPRESSOR		FAN		EVAPORATION CAPACITY MBH AT 95°F AMBIENT R-404A**								ELECTRICAL DATA 60HZ						MECHANICAL DATA									
		SIZE	QTY	BITZER	QTY	ACTYPE	+45°F	+35°F	+30°F	+25°F	+20°F	+15°F	+10°F	+5°F	0°F	230 VOLT		460 VOLT		575 VOLT		LIQUID RECEIVER CAPACITY		CONNECTIONS				APPROX. DRY WEIGHT	
																COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA			LIQUID	IN	SUCTION	IN		
		UNIT	HP	MODEL	CFM	+7.2°C	+1.7°C	-1.1°C	-3.9°C	-6.7°C	-9.4°C	-12°C	-15°C	-18°C	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	LB	(KG)	IN	(mm)	IN	(mm)	LB	(KG)	
M-0300-S	30	1	4GE-30Y	2	19000	331	274.0	251.0	228.0	205.0	185.5	165.5	147.1	130.3	89.7	122.7	44.9	61.1	35.9	49.9	122	(56)	1 1/8	(29)	2 1/8	(54)	1,737	(790)	
M-0330-S	33	1	6JE-33Y	2	19000	362	301.0	270.0	245.0	222.0	199.9	177.5	156.9	140.0	100.0	135.6	50.0	67.5	39.7	54.6	156	(71)	1 1/8	(29)	2 1/8	(54)	1,841	(837)	
M-0340-S	35	1	4FE-35Y	2	22750	386	326.0	295.0	270.0	246.0	221.0	197.5	178.2	158.4	95.0	133.2	47.5	66.2	38.0	54.3	156	(71)	1 1/8	(29)	2 1/8	(54)	1,745	(793)	
M-0350-S	35	1	6HE-35Y	2	22750	412	345.0	318.0	286.0	256.0	232.0	209.0	185.5	164.0	105.1	145.8	52.6	72.6	41.7	58.9	156	(71)	1 1/8	(29)	2 1/8	(54)	1,817	(826)	
M-0400-S	40	1	6GE-40Y	2	26500	462	389.0	355.0	324.0	291.0	264.0	236.0	212.0	188.3	141.0	194.5	70.5	96.7	56.4	79.1	189	(86)	1 1/8	(29)	2 1/8	(54)	1,859	(845)	
M-0500-S*	50	1	6FE-50Y	2	37000	567	478.0	438.0	395.0	359.0	326.0	292.0	260.0	231.0	143.6	201.1	71.8	105.2	57.1	86.8	222	(101)	1 1/8	(29)	2 1/8	(54)	1,922	(874)	

MODEL		COMPRESSOR		FAN		EVAPORATION CAPACITY MBH AT 95°F AMBIENT R-404A**								ELECTRICAL DATA 60HZ						MECHANICAL DATA								
		SIZE	QTY	BITZER	QTY	ACTYPE	0°F	-5°F	-10°F	-15°F	-20°F	-25°F	-30°F	-40°F	230 VOLT		460 VOLT		575 VOLT		LIQUID RECEIVER CAPACITY		CONNECTIONS				APPROX. DRY WEIGHT	
															COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA			LIQUID	IN	SUCTION	IN		
		UNIT	HP	MODEL	CFM	-18°C	-21°C	-23°C	-26°C	-29°C	-32°C	-35°C	-40°C	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	LB	(KG)	IN	(mm)	IN	(mm)	LB	(KG)	
L-0270-S	28	1	4FE-28Y	2	19000	156.5	138.6	123.7	108.5	94.6	82.0	70.5	49.8	76.9	106.7	38.5	53.5	30.8	42.3	122.1	(56)	7/8	(22)	2 1/8	(54)	1,648	(749)	
L-0280-S	28	1	6HE-28Y	2	19000	163.8	146.3	128.4	112.2	97.3	85.1	72.8	50.9	77.6	107.6	38.8	53.9	31.0	42.6	122.1	(56)	7/8	(22)	2 1/8	(54)	1,784	(811)	
L-0340-S	34	1	6GE-34Y	2	22750	193.9	171.9	151.8	135.0	118.0	102.6	88.5	64.3	84.6	120.2	42.3	60.3	33.3	47.3	156.2	(71)	1 1/8	(28)	2 1/8	(54)	1,835	(834)	
L-0440-S	44	1	6FE-44Y	2	26500	229.0	203.0	181.0	158.6	138.2	119.6	102.7	74.7	97.4	140.0	48.7	70.3	39.1	56.5	188.6	(86)	1 1/8	(28)	2 1/8	(54)	1,899	(863)	

R-407a

MODEL		COMPRESSOR		FAN		EVAPORATION CAPACITY MBH AT 95°F AMBIENT R-407A**								ELECTRICAL DATA 60HZ						MECHANICAL DATA									
		SIZE	QTY	BITZER	QTY	ACTYPE	+45°F	+35°F	+30°F	+25°F	+20°F	+15°F	+10°F	+5°F	0°F	230 VOLT		460 VOLT		575 VOLT		LIQUID RECEIVER CAPACITY		CONNECTIONS				APPROX. DRY WEIGHT	
																COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA			LIQUID	IN	SUCTION	IN		
		UNIT	HP	MODEL	CFM	+7.2°C	+1.7°C	-1.1°C	-3.9°C	-6.7°C	-9.4°C	-12°C	-15°C	-18°C	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	LB	(KG)	IN	(mm)	IN	(mm)	LB	(KG)	
M-0300-S	30	1	4GE-30Y	2	19000	321.0	266.0	240.0	214.0	191.3	169.1	150.2	131.4	115.4	89.7	122.7	44.9	61.1	35.9	49.9	134	(61)	1 1/8	(29)	2 1/8	(54)	1,737	(790)	
M-0330-S	33	1	6JE-33Y	2	19000	336.0	274.0	247.0	221.0	195.9	174.4	153.0	134.9	117.0	100.0	135.6	50.0	67.5	39.7	54.6	171	(78)	1 1/8	(29)	2 1/8	(54)	1,841	(837)	
M-0340-S	35	1	4FE-35Y	2	22750	381.0	301.0	278.0	250.0	223.0	197.1	174.6	152.4	133.5	95.0	133.2	47.5	66.2	38.0	54.3	171	(78)	1 1/8	(29)	2 1/8	(54)	1,745	(793)	
M-0350-S	35	1	6HE-35Y	2	22750	396.0	322.0	290.0	260.0	233.0	206.0	182.9	160.1	140.8	105.1	145.8	52.6	72.6	41.7	58.9	171	(78)	1 1/8	(29)	2 1/8	(54)	1,817	(826)	
M-0400-S	40	1	6GE-40Y	2	26500	462.0	376.0	340.0	306.0	274.0	243.0	216.0	191.9	167.8	141.0	194.5	70.5	96.7	56.4	79.1	207	(94)	1 1/8	(29)	2 1/8	(54)	1,859	(845)	
M-0500-S*	50	1	6FE-50Y	2	37000	552.0	449.0	405.0	364.0	323.0	288.0	254.0	225.0	196.0	143.6	211.1	71.8	105.2	57.1	86.8	243	(111)	1 1/8	(29)	2 1/8	(54)	1,922	(874)	

MODEL		COMPRESSOR		FAN		EVAPORATION CAPACITY MBH AT 95°F AMBIENT R-407A**								ELECTRICAL DATA 60HZ						MECHANICAL DATA								
		SIZE	QTY	BITZER	QTY	ACTYPE	0°F	-5°F	-10°F	-15°F	-20°F	-25°F	-30°F	-40°F	230 VOLT		460 VOLT		575 VOLT		LIQUID RECEIVER CAPACITY		CONNECTIONS				APPROX. DRY WEIGHT	
															COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA			LIQUID	IN	SUCTION	IN		
		UNIT	HP	MODEL	CFM	-18°C	-21°C	-23°C	-26°C	-29°C	-32°C	-35°C	-40°C	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	LB	(KG)	IN	(mm)	IN	(mm)	LB	(KG)	
L-0270-S	28	1	4FE-28Y	2	19000	140.8	123.7	106.7	91.3	77.3	67.3	56.3	37.2	76.9	106.7	38.5	53.5	30.8	42.3	134	(61)	7/8	(22)	2 1/8	(54)	1,648	(749)	
L-0280-S	28	1	6HE-28Y	2	19000	150.2	131.6	113.2	97.7	82.4	69.8	58.2	37.9	77.6	107.6	38.8	53.9	31.0	42.6	134	(61)	7/8	(22)	2 1/8	(54)	1,784	(811)	
L-0340-S	34	1	6GE-34Y	2	22750	173.0	151.8	130.7	111.5	95.3	84.1	70.6	47.0	84.6	120.2	42.3	60.3	33.3	47.3	171	(78)	1 1/8	(28)	2 1/8	(54)	1,835	(834)	
L-0440-S	44	1	6FE-44Y	2	26500	207.0	181.4	156.4	135.3	114.5	99.4	83.1	54.6	97.4	140.0	48.7	70.3	39.1	56.5	207	(94)	1 1/8	(28)	2 1/8	(54)	1,899	(863)	

\*Models with 900mm EC Fan as Standard (for 575V a VFD is used).

\*\*See Capacity Correction Factors on PG.7

Compressor RLA: Rated Load Amperage (RLA) estimated to the full load of the compressor RLA = Maximum Continuous Current (MCC) / 1.56  
Compressor MCC: Maximum Continuous Current (MCC) of the compressor(s)

MCA: Minimum Circuit Amperage (MCA) = RLA of the largest compressor X 1.25 + SUM RLA other compressor(s) + Total FLA Fans + Control panel load  
FLA Fan: Full Load Amperage (FLA) of the fans



Performance based on Bitzer EcoLine Compressor

TECHNICAL DATA - APPLICATION TEMPERATURE



DUAL SEMI-HERMETIC COMPRESSORS

R-404a

"M" MEDIUM: +45°F (+7.2°C) TO 0°F (-18°C) SST

MODEL	COMPRESSOR		FAN		EVAPORATION CAPACITY MBH AT 95°F AMBIENT R-404A**								ELECTRICAL DATA 60HZ						MECHANICAL DATA									
	SIZE	QTY	BITZER	QTY	ACTYPE	+45°F	+35°F	+30°F	+25°F	+20°F	+15°F	+10°F	+5°F	0°F	230 VOLT		460 VOLT		575 VOLT		LIQUID RECEIVER CAPACITY		CONNECTIONS				APROX. DRY WEIGHT	
															COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA			LIQUID	IN (mm)	SUCTION	IN (mm)		
M-0300-D	30	2	4PE-15	2	19000	365	301.0	273.0	247.0	222.0	199.4	176.1	154.9	137.5	48.7	120.0	24.4	64.3	19.6	51.9	156	(71)	1 1/8	(29)	2 1/8	(54)	2,117	(962)
M-0400-D	40	2	4NE-20	2	22750	429	355.0	322.0	292.0	263.0	237.0	210.0	187.8	165.2	57.7	144.2	28.8	74.2	23.6	60.9	189	(86)	1 1/8	(29)	2 1/8	(54)	2,195	(998)
M-0440-D	44	2	4JE-22	2	26500	475	400.0	364.0	327.0	296.0	267.0	237.0	212.0	187.1	61.5	156.6	30.8	78.7	24.4	62.7	222	(101)	1 1/8	(29)	2 1/8	(54)	2,381	(1,082)
M-0500-D*	50	2	4HE-25	2	37000	567	474.0	432.0	393.0	353.0	319.0	288.0	256.0	226.0	89.7	223.4	44.9	112.0	35.9	89.6	268	(122)	1 1/8	(29)	2 1/8	(54)	2,528	(1,149)
M-0600-D*	60	2	4GE-30	2	37000	624	524.0	478.0	435.0	395.0	358.0	319.0	287.0	254.0	100.0	246.6	50.0	123.5	39.7	98.1	268	(122)	1 3/8	(35)	2 5/8	(67)	2,643	(1,202)

DUAL COMPRESSORS

"L" LOW: +0°F (-18°C) TO -40°F (-40°C) SST

MODEL	COMPRESSOR		FAN		EVAPORATION CAPACITY MBH AT 95°F AMBIENT R-404A**								ELECTRICAL DATA 60HZ						MECHANICAL DATA								
	SIZE	QTY	BITZER	QTY	ACTYPE	0°F	-5°F	-10°F	-15°F	-20°F	-25°F	-30°F	-40°F	230 VOLT		460 VOLT		575 VOLT		LIQUID RECEIVER CAPACITY		CONNECTIONS				APROX. DRY WEIGHT	
														COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA			LIQUID	IN (mm)	SUCTION	IN (mm)		
L-0360-D	36	2	4HE-18	2	19000	209.0	187.0	163.8	144.8	125.4	109.5	93.4	67.6	54.1	132.3	27.1	70.4	21.7	54.5	156	(71)	1 1/8	(29)	2 1/8	(52)	2,256	(1,026)
L-0460-D	46	2	4GE-23	2	22750	241.0	216.0	192.4	170.7	148.4	130.2	111.7	80.7	57.7	144.2	28.8	72.2	23.1	57.6	189	(86)	1 1/8	(29)	2 1/8	(52)	2,326	(1,057)
L-0500-D	50	2	6JE-25	2	22750	257.0	229.0	203.0	178.5	154.0	134.0	115.7	81.5	71.0	174.2	35.5	87.3	28.4	69.6	189	(86)	1 1/8	(29)	2 1/8	(52)	2,420	(1,100)
L-0540-D	56	2	4FE-28	2	26500	284.0	254.0	227.0	201.0	175.2	153.6	131.7	96.3	76.9	191.2	38.5	96.0	30.8	76.8	222	(101)	1 1/8	(29)	2 5/8	(67)	2,344	(1,066)
L-0560-D	56	2	6HE-28	2	26500	296.0	264.0	234.0	207.0	182.0	156.5	135.6	96.5	77.6	192.8	38.8	96.7	31.0	77.3	222	(101)	1 1/8	(29)	2 5/8	(67)	2,468	(1,122)
L-0640-D*	68	2	6GE-34	2	37000	361.0	320.0	286.0	254.0	222.0	195.1	168.1	124.7	84.6	212.0	42.3	106.2	33.3	79.7	268	(122)	1 1/8	(29)	2 5/8	(67)	2,563	(1,165)

DUAL COMPRESSORS

R-407a

"M" MEDIUM: +45°F (+7.2°C) TO 0°F (-18°C) SST

MODEL	COMPRESSOR		FAN		EVAPORATION CAPACITY MBH AT 95°F AMBIENT R-407A**								ELECTRICAL DATA 60HZ						MECHANICAL DATA									
	SIZE	QTY	BITZER	QTY	ACTYPE	+45°F	+35°F	+30°F	+25°F	+20°F	+15°F	+10°F	+5°F	0°F	230 VOLT		460 VOLT		575 VOLT		LIQUID RECEIVER CAPACITY		CONNECTIONS				APROX. DRY WEIGHT	
															COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA			LIQUID	IN (mm)	SUCTION	IN (mm)		
M-0300-D	30	2	4PE-15	2	19000	345.0	282.0	254.0	228.0	204.0	181.3	158.9	140.0	121.3	48.7	120.0	24.4	64.3	19.6	71.8	171	(78)	1 1/8	(29)	2 1/8	(54)	2,117	(962)
M-0400-D	40	2	4NE-20	2	22750	403.0	333.0	300.0	267.0	239.0	213.0	189.2	165.4	145.2	57.7	144.2	28.8	74.2	23.6	60.7	207	(94)	1 1/8	(29)	2 1/8	(54)	2,195	(998)
M-0440-D	44	2	4JE-22	2	26500	454.0	374.0	336.0	301.0	268.0	236.0	208.0	182.7	157.5	61.5	156.6	30.8	78.7	24.4	62.5	243	(111)	1 1/8	(29)	2 1/8	(54)	2,381	(1,082)
M-0500-D*	50	2	4HE-25	2	37000	546.0	447.0	402.0	361.0	322.0	284.0	251.0	219.0	191.7	89.7	223.4	44.9	112.0	35.9	89.6	294	(134)	1 1/8	(29)	2 1/8	(54)	2,528	(1,149)
M-0600-D*	60	2	4GE-30	2	37000	620.0	513.0	463.0	416.0	373.0	332.0	292.0	258.0	226.0	100.0	246.6	50.0	123.5	39.7	98.1	294	(134)	1 3/8	(35)	2 5/8	(67)	2,643	(1,202)

DUAL COMPRESSORS

"L" LOW: +0°F (-18°C) TO -40°F (-40°C) SST

MODEL	COMPRESSOR		FAN		EVAPORATION CAPACITY MBH AT 95°F AMBIENT R-407A**								ELECTRICAL DATA 60HZ						MECHANICAL DATA								
	SIZE	QTY	BITZER	QTY	ACTYPE	0°F	-5°F	-10°F	-15°F	-20°F	-25°F	-30°F	-40°F	230 VOLT		460 VOLT		575 VOLT		LIQUID RECEIVER CAPACITY		CONNECTIONS				APROX. DRY WEIGHT	
														COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA			LIQUID	IN (mm)	SUCTION	IN (mm)		
L-0360-D	36	2	4HE-18	2	19000	191.3	167.4	145.5	125.4	105.5	91.8	76.2	50.2	54.1	132.3	27.1	70.4	21.7	54.6	171	(78)	1 1/8	(29)	2 1/8	(52)	2,256	(1,026)
L-0460-D	46	2	4GE-23	2	22750	226.0	198.4	173.3	150.2	129.0	107.4	89.5	60.8	57.7	144.2	28.8	72.2	23.1	57.8	207	(94)	1 1/8	(29)	2 1/8	(52)	2,326	(1,057)
L-0500-D	50	2	6JE-25	2	22750	237.0	204.0	178.4	152.9	130.4	112.5	92.9	61.8	71.0	174.2	35.5	87.3	28.4	69.7	207	(94)	1 1/8	(29)	2 1/8	(52)	2,420	(1,100)
L-0540-D	56	2	4FE-28	2	26500	264.0	231.0	201.0	173.9	146.9	126.6	107.2	71.3	76.9	191.2	38.5	96.0	30.8	77.1	243	(111)	1 1/8	(29)	2 5/8	(67)	2,344	(1,066)
L-0560-D	56	2	6HE-28	2	26500	277.0	245.0	213.0	183.3	156.1	131.0	110.4	72.7	77.6	192.8	38.8	96.7	31.0	77.6	243	(111)	1 1/8	(29)	2 5/8	(67)	2,468	(1,122)
L-0640-D*	68	2	6GE-34	2	37000	327.0	286.0	249.0	215.0	183.2	160.9	136.7	92.1	84.6	212.0	42.3	106.2	33.3	79.7	294	(134)	1 1/8	(29)	2 5/8	(67)	2,563	(1,165)

DUAL COMPRESSORS

\* Models with 900mm EC Fan as Standard (for 575V a VFD is used).

\*\*See Capacity Correction Factors on PG.7

Compressor RLA: Rated Load Amperage (RLA) estimated to the full load of the compressor RLA = Maximum Continuous Current (MCC) / 1.56  
Compressor MCC: Maximum Continuous Current (MCC) of the compressor(s)

MCA: Minimum Circuit Amperage (MCA) = RLA of the largest compressor X 1.25 + SUM RLA other compressor(s) + Total FLA Fans + Control panel load  
FLA Fan: Full Load Amperage (FLA) of the fans

TECHNICAL DATA - APPLICATION TEMPERATURE

Performance based on Bitzer EcoLine Compressor

TRIPLE SEMI-HERMETIC COMPRESSORS



R-404a

"M" MEDIUM: +45°F (+7.2°C) TO 0°F (-18°C) SST

MODEL	COMPRESSOR		FAN		EVAPORATION CAPACITY MBH AT 95°F AMBIENT R-404A**									ELECTRICAL DATA 60HZ						MECHANICAL DATA							
	SIZE	QTY	BITZER	ACTYPE	QTY	CFM	+45°F	+35°F	+30°F	+25°F	+20°F	+15°F	+10°F	+5°F	0°F	230 VOLT		460 VOLT		575 VOLT		LIQUID RECEIVER CAPACITY		CONNECTIONS		APROX. DRY WEIGHT	
							COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	LB	(KG)	IN (mm)	IN (mm)	LB	(KG)									
M-0270-T	27	3	4CE-9Y	2	19000	368	309.0	281.0	254.0	230.0	208.0	184.5	165.4	146.0	34.2	121.8	17.1	65.0	13.7	52.3	156.2	(71)	1 1/8 (29)	2 1/8 (54)	2,298	(1,045)	
M-0300-T	30	3	4VE-10Y	2	19000	386	319.0	293.0	261.0	236.0	212.0	189.6	167.0	148.4	38.5	135.7	19.2	71.8	15.4	57.9	156.2	(71)	1 1/8 (29)	2 1/8 (54)	2,542	(1,156)	
M-0360-T	36	3	4TE-12Y	2	26500	466	395.0	359.0	325.0	293.0	261.0	234.0	206.0	181.5	42.3	155.7	21.2	78.3	16.9	62.7	188.6	(86)	1 1/8 (29)	2 1/8 (54)	2,552	(1,160)	
M-0450-T*	45	3	4PE-15Y	2	37000	554	463.0	420.0	379.0	337.0	303.0	268.0	239.0	209.0	48.7	179.9	24.4	90.3	19.6	72.5	221.7	(101)	1 1/8 (29)	2 1/8 (54)	2,577	(1,171)	
M-0600-T*	60	3	4NE-20Y	2	37000	636	533.0	478.0	432.0	390.0	351.0	315.0	278.0	248.0	57.7	209.1	28.8	104.6	23.6	85.5	268	(122)	1 3/8 (35)	2 5/8 (67)	2,699	(1,227)	

"L" LOW: +0°F (-18°C) TO -40°F (-40°C) SST

MODEL	COMPRESSOR		FAN		EVAPORATION CAPACITY MBH AT 95°F AMBIENT R-404A**									ELECTRICAL DATA 60HZ						MECHANICAL DATA						
	SIZE	QTY	BITZER	ACTYPE	QTY	CFM	0°F	-5°F	-10°F	-15°F	-20°F	-25°F	-30°F	-40°F	230 VOLT		460 VOLT		575 VOLT		LIQUID RECEIVER CAPACITY		CONNECTIONS		APROX. DRY WEIGHT	
							COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	LB	(KG)	IN (mm)	IN (mm)	LB	(KG)								
L-0360-T	36	3	4PE-12	2	19000	193.5	168.4	147.9	129.2	110.2	94.9	79.5	53.8	34.6	126.9	17.3	63.6	14.4	52.5	171	(78)	7/8 (22)	2 1/8 (54)	2,777	(1,262)	
L-0420-T	42	3	4NE-14	2	22750	231.0	202.0	178.2	156.4	134.3	116.4	98.5	68.3	39.7	147.2	19.9	72.1	15.9	59.2	207	(94)	1 1/8 (29)	2 1/8 (54)	2,783	(1,265)	
L-0450-T	45	3	4JE-15	2	26500	269.0	239.0	212.0	184.2	161.3	138.1	117.1	82.8	50.0	180.7	25.0	90.7	20.0	72.5	207	(94)	1 1/8 (29)	2 1/8 (54)	3,162	(1,437)	
L-0540-T*	54	3	4HE-18Y	2	26500	304.0	272.0	241.0	213.0	187.0	160.7	139.1	97.9	54.1	194.0	27.1	97.5	21.7	78.0	243	(111)	1 1/8 (29)	2 1/8 (54)	3,064	(1,393)	
L-0690-T*	69	3	4GE-23Y	2	37000	365.0	323.0	287.0	255.0	222.0	194.2	166.6	121.1	57.7	209.1	28.8	104.6	23.1	83.9	295	(134)	1 1/8 (29)	2 5/8 (67)	3,151	(1,432)	

R-407a

"M" MEDIUM: +45°F (+7.2°C) TO 0°F (-18°C) SST

MODEL	COMPRESSOR		FAN		EVAPORATION CAPACITY MBH AT 95°F AMBIENT R-407A**									ELECTRICAL DATA 60HZ						MECHANICAL DATA							
	SIZE	QTY	BITZER	ACTYPE	QTY	CFM	+45°F	+35°F	+30°F	+25°F	+20°F	+15°F	+10°F	+5°F	0°F	230 VOLT		460 VOLT		575 VOLT		LIQUID RECEIVER CAPACITY		CONNECTIONS		APROX. DRY WEIGHT	
							COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	LB	(KG)	IN (mm)	IN (mm)	LB	(KG)									
M-0270-T	27	3	4CE-9Y	2	19000	363.0	289.0	270.0	243.0	218.0	195.0	173.7	152.6	134.9	34.2	121.8	17.1	65.0	13.7	52.3	171	(78)	1 1/8 (29)	2 1/8 (54)	2,298	(1,045)	
M-0300-T	30	3	4VE-10Y	2	19000	375.0	310.0	279.0	250.0	224.0	199.1	176.6	154.1	135.3	38.5	135.7	19.2	71.8	15.4	57.9	171	(78)	1 1/8 (29)	2 1/8 (54)	2,542	(1,156)	
M-0360-T	36	3	4TE-12Y	2	26500	462.0	382.0	345.0	310.0	278.0	246.0	219.0	193.7	168.9	42.3	155.7	21.2	78.3	16.9	62.7	207	(94)	1 1/8 (29)	2 1/8 (54)	2,552	(1,160)	
M-0450-T*	45	3	4PE-15Y	2	37000	545.0	446.0	401.0	360.0	322.0	284.0	252.0	220.0	191.2	48.7	179.9	24.4	90.3	19.6	72.5	243	(111)	1 1/8 (29)	2 1/8 (54)	2,577	(1,171)	
M-0600-T*	60	3	4NE-20Y	2	37000	619.0	511.0	460.0	409.0	370.0	327.0	291.0	257.0	226.0	57.7	209.1	28.8	104.6	23.6	85.5	294	(134)	1 3/8 (35)	2 5/8 (67)	2,699	(1,227)	

"L" LOW: +0°F (-18°C) TO -40°F (-40°C) SST

MODEL	COMPRESSOR		FAN		EVAPORATION CAPACITY MBH AT 95°F AMBIENT R-407A**									ELECTRICAL DATA 60HZ						MECHANICAL DATA						
	SIZE	QTY	BITZER	ACTYPE	QTY	CFM	0°F	-5°F	-10°F	-15°F	-20°F	-25°F	-30°F	-40°F	230 VOLT		460 VOLT		575 VOLT		LIQUID RECEIVER CAPACITY		CONNECTIONS		APROX. DRY WEIGHT	
							COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	COMP. RLA	SYSTEM MCA	LB	(KG)	IN (mm)	IN (mm)	LB	(KG)								
L-0360-T	36	3	4PE-12	2	19000	179.6	154.4	133.5	114.4	95.7	78.0	63.8	39.5	34.6	126.9	17.3	63.6	14.4	52.6	171	(78)	7/8 (22)	2 1/8 (54)	2,777	(1,262)	
L-0420-T	42	3	4NE-14	2	22750	214.0	187.1	162.6	138.3	118.2	95.1	78.3	50.7	39.7	147.2	19.9	72.1	15.9	59.5	207	(94)	1 1/8 (29)	2 1/8 (54)	2,783	(1,265)	
L-0450-T	45	3	4JE-15	2	26500	241.0	210.0	182.1	154.1	130.7	114.2	94.3	61.3	50.0	180.7	25.0	90.7	20.0	72.8	207	(94)	1 1/8 (29)	2 1/8 (54)	3,162	(1,437)	
L-0540-T	54	3	4HE-18Y	2	26500	275.0	244.0	211.0	182.1	155.1	132.5	109.6	73.3	54.1	194.0	27.1	97.5	21.7	78.3	243	(111)	1 1/8 (29)	2 1/8 (54)	3,064	(1,393)	
L-0690-T*	69	3	4GE-23Y	2	37000	336.0	296.0	258.0	221.0	189.9	160.1	133.4	88.8	57.7	209.1	28.8	104.6	23.1	83.9	295	(134)	1 1/8 (29)	2 5/8 (67)	3,151	(1,432)	

\*Models with 900mm EC Fan as Standard (for 575V a VFD is used).

\*\*See Capacity Correction Factors on PG.7

Compressor RLA: Rated Load Amperage (RLA) estimated to the full load of the compressor RLA = Maximum Continuous Current (MCC) / 1.56  
Compressor MCC: Maximum Continuous Current (MCC) of the compressor(s)

MCA: Minimum Circuit Amperage (MCA) = RLA of the largest compressor X 1.25 + SUM RLA other compressor(s) + Total FLA Fans + Control panel load  
FLA Fan: Full Load Amperage (FLA) of the fans

CAPACITY CORRECTION FACTORS

Ambient Temperature in °F	60	65	70	75	80	85	90	95	100	105	110	115	120	125
Capacity Factor R-404A & R-507A	1.32	1.28	1.23	1.19	1.15	1.10	1.05	1.00	0.95	0.90	0.85	0.81	0.76	0.72
Capacity Factor R-407A & R-407C	1.29	1.25	1.21	1.17	1.12	1.08	1.04	1.00	0.97	0.92	0.87	0.83	0.79	0.75

Some limitations on models with high SST.

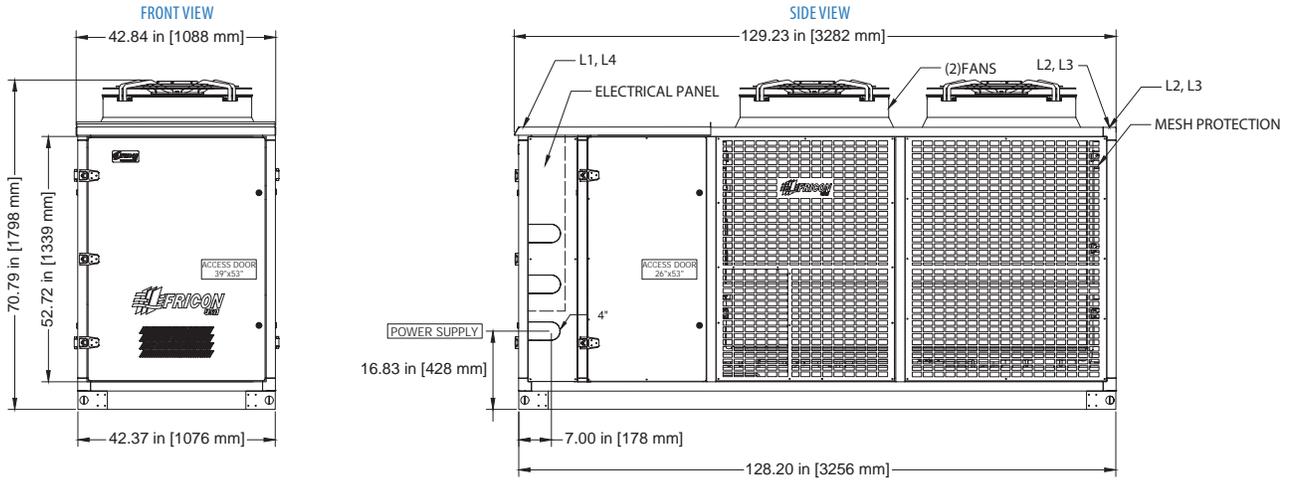
HAOP (High Ambient Operation Package) required for operation above +110°F

‡ Multiply capacity by .83 when used with 50 Hz power.

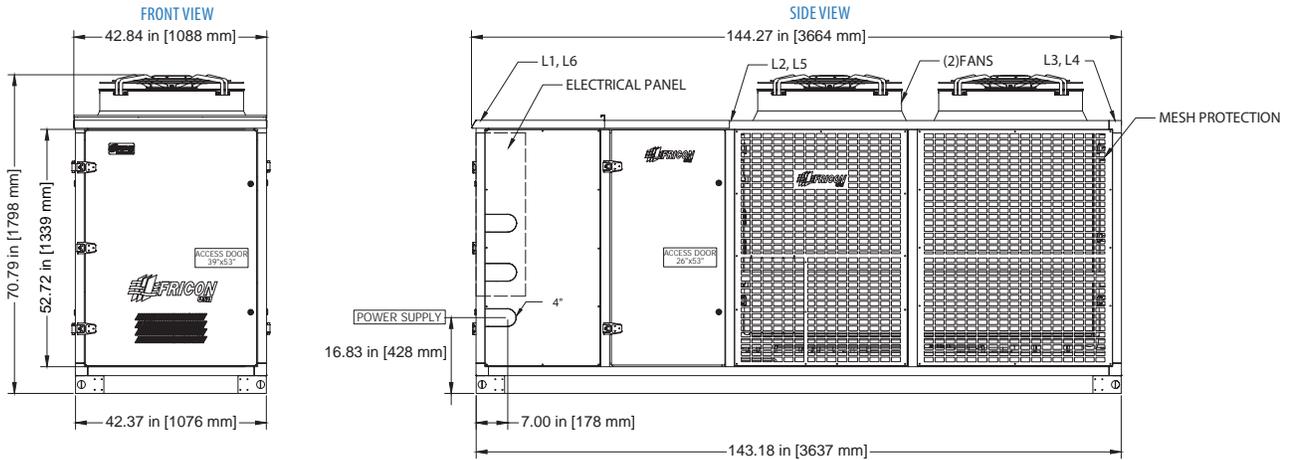
All capacities are calculated at 20°F return gas temperature and dew point values

DRAWINGS

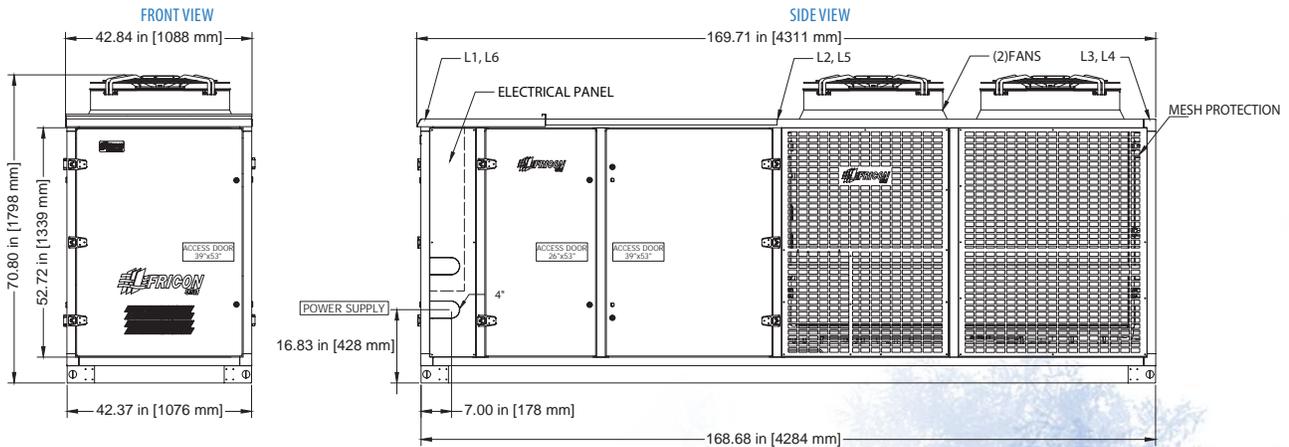
SINGLE COMPRESSOR



DUAL COMPRESSORS



TRIPLE COMPRESSORS



**FRICONUSA AIR COOLED CONDENSING UNITS**

