KRAMER

A2L

NEXT GEN ALL-TEMP LOW PROFILE UNIT COOLER

Walk-Ins: Small to Medium Cooler and Freezer Applications

Air Defrost

5,000 to 47,700 BTUH

Electric Defrost

3,200 to 34,300 BTUH

FEATURES

All-Temps were the original low profile unit coolers with the air draw-through design that established the industry standard as the all-purpose model for walk-in coolers, freezers, and other applications. We've taken these unit coolers to the next level with the release of the Next-Gen All-Temp models. The units feature a new fan guard design and deep draw venturi to achieve optimal airflow and easy access for serviceability. These models can be used with multiple refrigerants, and are available in air and electric.

SIZES

There are a wide array of sizes available with capacities ranging from 2,700 to 45,900 BTUH at a 10° TD. One through six fan models are available with air flow spanning a range of 800 to 4,650 CFM.

HOUSING

The lightweight yet durable embossed aluminum casing is designed to prevent short cycling of the discharge air with baffled fan sections. These units are compliant with NSF requirements and designed to mount flush to the ceiling. The top panel features 1/2" wide slotted mounting points for easy installation. The removable drain fitting is located at the bottom of the drain pan for easy fieldconnection and can be replaced without changing the entire drain pan. The end panels can be easily slid out from the front of the unit, providing convenient access to the spacious electrical and piping compartments from the front or side for easy maintenance.

COIL

Copper hairpins consist of high efficiency 3/8" enhanced copper tubes which are staggered and mechanically expanded into corrugated aluminum fins achieving maximum heat transfer while reducing refrigerant charge. Die formed fin collars provide even fin spacing. Models are available in 4 and 6 fins per inch (FPI). Sweat connections are standard on all models.

MOTORS

Standard models feature highly efficient Dual Speed Electronically Commutated (EC) motors. Available for 115V or 208-230V and are compliant with California Title 24 regulations. All motors include thermal overload protection.

FANS AND FAN GUARDS

Heavy duty 12" aluminum fans are balanced to provide vibration-free operation. Improved black plastic fan guard design and deep draw venturi achieve optimal air pattern.

REFRIGERANTS

Low Profile Unit Coolers are optimized for multiple A2L refrigerants including R454A, R454C and R455A. Please specify the refrigerant requirements when ordering. A seperate compartment is provided for all refrigerant connections, which allows for internal mounting of expansion valves.

ELECTRICAL

Available for 115V and 208-230V. A large electrical compartment is supplied internal to the unit to house the electrical components and is easily accessible by removing the slide out end panel. All models are UL and cUL listed and are available for 60 Hz or 50 Hz applications.

AIR DEFROST

Air Defrost models are designed for use in coolers 35°F and warmer. All components are factory wired to convenient screw-type terminal strips.

ELECTRIC DEFROST

Electric Defrost 6 FPI models are designed for use in coolers and freezers between 34°F to -20°F. Electric Defrost 4 FPI models are designed for use in freezers between 32°F to -20°F. Defrost heaters are mounted on the air intake side of the unit for optimal performance and easy maintenance.

An additional lower heater is installed inside the drain pan for fast, reliable drainage. A defrost termination fan delay thermostat terminates the defrost cycle when the temperature is satisfied. The fan delay allows the warm coil to cool after a defrost cycle prior to the fans turning on. A heater safety thermostat is installed to prevent overheating.

OPTIONAL FEATURES

- EcoNet® Enabled Controller1 (factory-installed)
- EcoNet® Command Center (loose)
- Thermostat - Mechanical or Electric (mounted or loose)
- Thermostatic Expansion Valve (mounted or loose)
- Electronic Expansion Valve (mounted or loose)
- Safety Shut Off Valve (SSOV) in place Liquid Line Solenoid Available Loose for field installation.
- Insulated Drain Pan
- Painted Cabinet (White or Black)
- Stainless Steel Cabinet
- Coated Coil (Russproof, Heresite, Bronz-Glow, or Electrofin®)

1. EcoNet Control Package includes: EEV, suction pressure transducer, suction entering air coil temp. thermistors, local on-board two-row backlit LCD display and push-button adjustments. (Controller replaces TXV, liquid line solenoid valve, room thermostat, defrost termination, fan delay, and time clock.)

MODEL NOMENCLATURE

CONFIGURABLE BASE MODEL

K	A	L	6	E	042	D	D	A
Brand	Refrigerant Class	Connections	Fins per Inch (FPI)	Defrost Type	BTUH in Hundreds	Unit Voltage1	Motor Type	Vintage
K = Kramer	A2L R-454A R-454C R-455A	L = Standard U = Reverse	4 FPI 6 FPI	A = Air E = Electric (Low Temp)	XXX	A =115/1/60 D = 208-230/1/60 E = 208-230/3/60	D = Dual Speed EC	A

1. Refrigerant and electrical connection locations have been changed for the Next-Gen All-Temp design. Standard connections "L" are now opposite of the legacy All-Temp models. Mirror connections "U" are the same end as legacy All-Temp models and are available only as built-to-order base units with no installed options.
2. EcoNet approved refrigerants are: R454A, R454C. R455A.
3. EcoNet Control Package includes: EEV; suction pressure transducer; suction, entering air coil temp. thermistors; local on-board two-row LCD display and push-button adjustments. (Controller replaces TXV, room thermostat, defrost termination and fan delay, and time clock.)

2019 DEALER DESIGN AWARDS
RSNEWS GOLD
GOLD AWARD WINNER

ECONET® ENABLED UNIT COOLERS (OPTIONAL)

Developed in conjunction with Rheem Manufacturing specifically for walk-in coolers and freezers – it builds in the reliability and efficiency of Rheem's EcoNet technology.

- Saves energy in refrigeration systems through precise superheat and space temperature control, fan cycling, and controlling how often the system goes into defrost based on compressor runtime.
- Eliminates unnecessary defrosts
- Maximizes energy efficiency with less compressor runtime
- Reduces fan speed to 50% during off cycle for energy savings
- Can be used with a condensing unit in single and multiple evaporator installations as a group.

Optional **EcoNet** Command Center with intuitive graphical interface controls up to 32 devices (including the Command Center) through one display, provides continuous communication between system components, and the remote mount display allows for EcoNet Enabled Unit Coolers to be programmed, monitored and troubleshot outside of the space being cooled.

APPLICATION RATING & ELECTRICAL DATA // AIR DEFROST

	Model No.	BTUH Capacity @ 25F ST and 10TD R454A,R454C R455A	CFM	No. of Fans	115V			208-230/1		
					Total Fan Motor Amps (1Phase) EC Motors	MCA	MOPD	Total Fan Motor Amps (1Phase) EC Motors	MCA	MOPD
6 FPI	KAV6A050*DA	5,000	800	1	0.8	15.0	20	0.5	15.0	20
	KAV6A062*DA	6,200	785	1	0.8	15.0	20	0.5	15.0	20
	KAV6A081*DA	8,100	775	1	0.8	15.0	20	0.5	15.0	20
	KAV6A088*DA	8,800	1,600	2	1.6	15.0	20	1.0	15.0	20
	KAV6A113*DA	11,300	1,570	2	1.6	15.0	20	1.0	15.0	20
	KAV6A141*DA	14,100	1,550	2	1.6	15.0	20	1.0	15.0	20
	KAV6A159*DA	15,900	1,550	2	1.6	15.0	20	1.0	15.0	20
	KAV6A170*DA	17,000	2,355	3	2.4	15.0	20	1.5	15.0	20
	KAV6A196*DA	19,600	2,355	3	2.4	15.0	20	1.5	15.0	20
	KAV6A220*DA	22,000	2,325	3	2.4	15.0	20	1.5	15.0	20
	KAV6A234*DA	23,400	3,140	4	3.2	15.0	20	2.0	15.0	20
	KAV6A289*DA	28,900	3,140	4	3.2	15.0	20	2.0	15.0	20
	KAV6A316*DA	31,600	3,199	4	3.2	15.0	20	2.0	15.0	20
	KAV6A375*DA	37,500	3,875	5	4.0	15.0	20	2.5	15.0	20
	KAV6A404*DA	40,400	4,650	6	4.8	15.0	20	3.0	15.0	20
	KAV6A477*DA	47,700	4,650	6	4.8	15.0	20	3.0	15.0	20

*Asterisks represents variable character based on voltage ordered. See page 4 for nomenclature.
Dual Speed EC Motors include thermal overload protection.

APPLICATION RATING AND ELECTRICAL DATA // ELECTRIC DEFROST MODELS

	Model No.	BTUH Capacity @ -20F ST and 10TD	CFM	No. of Fans	Total Fan Motor Amps (1Phase)	208-230V/1				208-230V/3		Heater Amps		Heater Watts
		R454A,R454C R455A			EC Motors	Base Model		Econet Enabled		Base Model		230V		
					208-230V	MCA	MOPD	MCA	MOPD	MCA	MOPD	1PH	3PH	
6 FPI	KAV6E042DDA	4,200	800	1	0.5	15.0	20	15.0	20	-	-	4.9	-	1,125
	KAV6E051DDA	5,100	785	1	0.5	15.0	20	15.0	20	-	-	4.9	-	1,125
	KAV6E058DDA	5,800	775	1	0.5	15.0	20	15.0	20	-	-	4.9	-	1,125
	KAV6E079DDA	7,900	1,600	2	1.0	15.0	20	15.0	20	-	-	9.8	-	2,250
	KAV6E092DDA	9,200	1,570	2	1.0	15.0	20	15.0	20	-	-	9.8	-	2,250
	KAV6E110DDA	11,000	1,550	2	1.0	15.0	20	15.0	20	-	-	9.8	-	2,250
	KAV6E129DDA	12,900	1,550	2	1.0	15.0	20	15.0	20	-	-	9.8	-	2,250
	KAV6E148DDA	14,800	2,355	3	1.5	15.0	20	15.3	20	-	-	14.3	-	3,300
	KAV6E173DDA	17,300	2,325	3	1.5	15.0	20	15.3	20	-	-	14.3	-	3,300
	KAV6E194DDA	19,400	3,140	4	2.0	15.0	20	20.2	25	-	-	19.2	-	4,425
	KAV6E218DDA	21,800	3,100	4	2.0	15.0	20	20.2	25	-	-	19.2	-	4,425
	KAV6E237*DA	23,700	3,925	5	2.5	15.0	20.0	25.1	30	15.0	20	24.1	14.0	5,550
	KAV6E290*DA	29,000	4,710	6	3.0	15.0	20.0	30.0	35	15.0	20	29.0	16.8	6,675
	KAV6E343*DA	34,300	4,650	6	3.0	15.0	20.0	30.0	35	15.0	20	29.0	16.8	6,675

Capacity Correction for Electric Defrost Evaporators				
SST (Dew)	20	-10	-20	-30
Multiply Capacity by:	1.15	1.0375	1	0.9625

*Asterisks represents variable character based on voltage ordered. See page 4 for nomenclature.
Dual Speed EC Motors include thermal overload protection.
Econet not available in 208-230/3
Econet Enabled Calculation includes minimum 1 Amp for control voltages.

APPLICATION RATING AND ELECTRICAL DATA // ELECTRIC DEFROST MODELS

	Model No.	BTUH Capacity @ -20F ST and 10TD	CFM	No. of Fans	Total Fan Motor Amps (1Phase)	208-230V/1				208-230V/3		Heater Amps		Heater Watts
		R454A,R454C R455A			EC Motors	Base Model		Econet Enabled		Base Model		230V		
					208-230V	MCA	MOPD	MCA	MOPD	MCA	MOPD	1PH	3PH	
4 FPI	KAV4E032DDA	3,200	800	1	0.5	15.0	20	15.0	20	-	-	4.9	-	1,125
	KAV4E040DDA	4,000	785	1	0.5	15.0	20	15.0	20	-	-	4.9	-	1,125
	KAV4E046DDA	4,600	775	1	0.5	15.0	20	15.0	20	-	-	4.9	-	1,125
	KAV4E061DDA	6,100	1,600	2	1.0	15.0	20	15.0	20	-	-	9.8	-	2,250
	KAV4E076DDA	7,600	1,570	2	1.0	15.0	20	15.0	20	-	-	9.8	-	2,250
	KAV4E099DDA	9,900	1,550	2	1.0	15.0	20	15.0	20	-	-	9.8	-	2,250
	KAV4E114DDA	11,400	2,355	3	1.5	15.0	20	15.3	20	-	-	14.3	-	3,300
	KAV4E133DDA	13,300	2,325	3	1.5	15.0	20	15.3	20	-	-	14.3	-	3,300
	KAV4E150DDA	15,000	3,140	4	2.0	15.0	20	20.2	25	-	-	19.2	-	4,425
	KAV4E170DDA	17,000	3,100	4	2.0	15.0	20	20.2	25	-	-	19.2	-	4,425
	KAV4E184*DA	18,400	3,925	5	2.5	15.0	20.0	25.1	30	15.0	20	24.1	14.0	5,550
	KAV4E232*DA	23,200	4,710	6	3.0	15.0	20.0	30.0	35	15.0	20	29.0	16.8	6,675
	KAV4E281*DA	28,100	4,650	6	3.0	15.0	20.0	30.0	35	15.0	20	29.0	16.8	6,675

Capacity Correction for Electric Defrost Evaporators				
SST (Dew)	20	-10	-20	-30
Multiply Capacity by:	1.15	1.0375	1	0.9625

*Asterisks represents variable character based on voltage ordered. See page 4 for nomenclature.
Dual Speed EC Motors include thermal overload protection.
Econet not available in 208-230/3
Econet Enabled Calculation includes minimum 1 Amp for control voltages.

DISTRIBUTOR NOZZLES & EXPANSION VALVES // AIR DEFROST MODELS

	Model No.	Part Numbers						
		Nozzle @ Liq. Temp.		TXV @ Liq. Temp.		EEV @ Liq. Temp		No. of Circuits
		50°F	100°F	50°F	100°F	50°F	100°F	
6 FPI - R454A	KAV6A050*DA	-	-	SBFTE-AAA-C	SBFTE-AA-C	SER-AA	SER-AA	1
	KAV6A062*DA	-	-	SBFTE-AAA-C	SBFTE-AA-C	SER-AA	SER-AA	1
	KAV6A081*DA	1/4,TYPE L	3/4,TYPE L	SBFTE-AA-C	SBFTE-A-C	SER-AA	SER-A	2
	KAV6A088*DA	1/3,TYPE L	3/4,TYPE L	SBFTE-AA-C	SBFTE-A-C	SER-AA	SER-A	2
	KAV6A113*DA	1/3,TYPE L	1,TYPE L	SBFTE-AA-C	SBFTE-A-C	SER-A	SER-A	2
	KAV6A141*DA	1/2,TYPE L	1-1/2,TYPE L	SBFTE-A-C	SBFTE-A-C	SER-A	SER-A	3
	KAV6A159*DA	1/2,TYPE L	1-1/2,TYPE L	SBFTE-A-C	SBFTE-B-C	SER-A	SER-B	3
	KAV6A170*DA	3/4,TYPE L	1-1/2,TYPE L	SBFTE-A-C	SBFTE-B-C	SER-A	SER-B	4
	KAV6A196*DA	3/4,TYPE L	1-1/2,TYPE L	SBFTE-A-C	SBFTE-B-C	SER-B	SER-B	3
	KAV6A220*DA	3/4,TYPE L	2,TYPE L	SBFTE-A-C	SBFTE-B-C	SER-B	SER-B	4
	KAV6A234*DA	3/4,TYPE L	2,TYPE L	SBFTE-A-C	SBFTE-B-C	SER-B	SER-B	4
	KAV6A289*DA	1,TYPE L	2-1/2,TYPE L	SBFTE-B-C	SBFTE-C-C	SER-B	SER-B	6
	KAV6A316*DA	1,TYPE L	2-1/2,TYPE L	SBFTE-B-C	SBFTE-C-C	SER-B	SER-C	6
	KAV6A375*DA	1-1/2,TYPE L	3,TYPE L	SBFTE-B-C	SBFTE-C-C	SER-B	SER-C	8
	KAV6A404*DA	1-1/2,TYPE L	3,TYPE L	SBFTE-B-C	SBFTE-C-C	SER-B	SER-C	7
	KAV6A477*DA	1-1/2,TYPE L	4,TYPE L	SBFTE-C-C	SBFTE-C-C	SER-C	SER-C	8
6 FPI - R454C	KAV6A050*DA	-	-	SBFVE-AAA-C	SBFVE-AA-C	SER-AA	SER-AA	1
	KAV6A062*DA	-	-	SBFVE-AA-C	SBFVE-AA-C	SER-AA	SER-AA	1
	KAV6A081*DA	1/4,TYPE L	3/4,TYPE L	SBFVE-AA-C	SBFVE-A-C	SER-A	SER-A	2
	KAV6A088*DA	1/3,TYPE L	3/4,TYPE L	SBFVE-AA-C	SBFVE-A-C	SER-A	SER-A	2
	KAV6A113*DA	1/3,TYPE L	1,TYPE L	SBFVE-A-C	SBFVE-A-C	SER-A	SER-A	2
	KAV6A141*DA	1/2,TYPE L	1-1/2,TYPE L	SBFVE-A-C	SBFVE-A-C	SER-A	SER-B	3
	KAV6A159*DA	1/2,TYPE L	1-1/2,TYPE L	SBFVE-A-C	SBFVE-B-C	SER-A	SER-B	3
	KAV6A170*DA	3/4,TYPE L	1-1/2,TYPE L	SBFVE-A-C	SBFVE-B-C	SER-B	SER-B	4
	KAV6A196*DA	3/4,TYPE L	2,TYPE L	SBFVE-A-C	SBFVE-B-C	SER-B	SER-B	3
	KAV6A220*DA	3/4,TYPE L	2,TYPE L	SBFVE-B-C	SBFVE-B-C	SER-B	SER-B	4
	KAV6A234*DA	3/4,TYPE L	2,TYPE L	SBFVE-B-C	SBFVE-B-C	SER-B	SER-B	4
	KAV6A289*DA	1,TYPE L	2-1/2,TYPE L	SBFVE-B-C	SBFVE-C-C	SER-B	SER-C	6
	KAV6A316*DA	1,TYPE L	3,TYPE L	SBFVE-B-C	SBFVE-C-C	SER-B	SER-C	6
	KAV6A375*DA	1-1/2,TYPE L	4,TYPE L	SBFVE-C-C	SBFVE-C-C	SER-C	SER-C	8
	KAV6A404*DA	1-1/2,TYPE L	4,TYPE L	SBFVE-C-C	SBFVE-C-C	SER-C	SER-C	7
	KAV6A477*DA	1-1/2,TYPE L	4,TYPE L	SBFVE-C-C	SBFVE-C-C	SER-C	SER-C	8

The distributor lines are 3/16" tube & 14" long.
* Each asterisk represents a variable character based on voltage ordered. See page 4 for nomenclature.
^ TXV selections are based on +25°F suction temp., 8°F to 12°F evaporator TD. Contact factory for operating conditions outside of this range.
Base models (no factory-mounted components) include nozzles sized for 100°F liquid shipped loose.

DISTRIBUTOR NOZZLES & EXPANSION VALVES // AIR DEFROST MODELS

	Model No.	Part Numbers						
		Nozzle @ Liq. Temp.		TXV @ Liq. Temp.		EEV @ Liq. Temp		No. of Circuits
		50°F	100°F	50°F	100°F	50°F	100°F	
6 FPI - R455A	KAV6A050*DA	-	-	SBFVE-AAA-C	SBFVE-AA-C	SER-AA	SER-AA	1
	KAV6A062*DA	-	-	SBFVE-AA-C	SBFVE-AA-C	SER-AA	SER-AA	1
	KAV6A081*DA	1/4,TYPE L	3/4,TYPE L	SBFVE-AA-C	SBFVE-A-C	SER-A	SER-A	2
	KAV6A088*DA	1/3,TYPE L	3/4,TYPE L	SBFVE-AA-C	SBFVE-A-C	SER-A	SER-A	2
	KAV6A113*DA	1/3,TYPE L	1,TYPE L	SBFVE-A-C	SBFVE-A-C	SER-A	SER-A	2
	KAV6A141*DA	1/2,TYPE L	1-1/2,TYPE L	SBFVE-A-C	SBFVE-A-C	SER-A	SER-B	3
	KAV6A159*DA	1/2,TYPE L	1-1/2,TYPE L	SBFVE-A-C	SBFVE-B-C	SER-A	SER-B	3
	KAV6A170*DA	3/4,TYPE L	1-1/2,TYPE L	SBFVE-A-C	SBFVE-B-C	SER-B	SER-B	4
	KAV6A196*DA	3/4,TYPE L	2,TYPE L	SBFVE-A-C	SBFVE-B-C	SER-B	SER-B	3
	KAV6A220*DA	3/4,TYPE L	2,TYPE L	SBFVE-B-C	SBFVE-B-C	SER-B	SER-B	4
	KAV6A234*DA	3/4,TYPE L	2,TYPE L	SBFVE-B-C	SBFVE-B-C	SER-B	SER-B	4
	KAV6A289*DA	1,TYPE L	2-1/2,TYPE L	SBFVE-B-C	SBFVE-C-C	SER-B	SER-C	6
	KAV6A316*DA	,1,TYPE L	,3,TYPE L	SBFVE-B-C	SBFVE-C-C	SER-B	SER-C	6
	KAV6A375*DA	1-1/2,TYPE L	4,TYPE L	SBFVE-C-C	SBFVE-C-C	SER-C	SER-C	8
	KAV6A404*DA	1-1/2,TYPE L	,4,TYPE L	SBFVE-C-C	SBFVE-C-C	SER-C	SER-C	7
	KAV6A477*DA	1-1/2,TYPE L	4,TYPE L	SBFVE-C-C	SBFVE-C-C	SER-C	SER-C	8

The distributor lines are 3/16" tube & 14" long.
* Each asterisk represents a variable character based on voltage ordered. See page 4 for nomenclature.
^ TXV selections are based on +25°F suction temp., 8°F to 12°F evaporator TD. Contact factory for operating conditions outside of this range.
Base models (no factory-mounted components) include nozzles sized for 100°F liquid shipped loose.

LOOSE COMPONENTS REQUIRED FOR A2L MITIGATION CONTROL // AIR DEFROST MODELS

	Model No.	Loose SSOV Mitigation Valve @ Liquid Temp			Loose CSOV Mitigation CV	
		Size	50°F	100°F	Size	Description
6 FPI - R454A	KAV6A050*DA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6A062*DA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6A081*DA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6A088*DA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6A113*DA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6A141*DA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6A159*DA	3/8	SSOV3S130	SSOV6S130	7/8	CSOV-7S
	KAV6A170*DA	3/8	SSOV3S130	SSOV6S130	7/8	CSOV-7S
	KAV6A196*DA	1/2	SSOV3S130	SSOV6S140	7/8	CSOV-7S
	KAV6A220*DA	1/2	SSOV3S130	SSOV6S140	7/8	CSOV-7S
	KAV6A234*DA	1/2	SSOV6S140	SSOV6S140	7/8	CSOV-7S
	KAV6A289*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6A316*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6A375*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6A404*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6A477*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
6 FPI - R454C	KAV6A050*DA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6A062*DA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6A081*DA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6A088*DA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6A113*DA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6A141*DA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6A159*DA	3/8	SSOV3S130	SSOV6S130	7/8	CSOV-7S
	KAV6A170*DA	3/8	SSOV3S130	SSOV6S130	7/8	CSOV-7S
	KAV6A196*DA	1/2	SSOV3S130	SSOV6S140	7/8	CSOV-7S
	KAV6A220*DA	1/2	SSOV3S130	SSOV6S140	7/8	CSOV-7S
	KAV6A234*DA	1/2	SSOV6S140	SSOV6S140	7/8	CSOV-7S
	KAV6A289*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6A316*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6A375*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6A404*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6A477*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S

Note: Liquid line solenoids operate as double duty mitigation controls for A2L leak mitigation system and are required to ship loose and be installed outside the refrigerated space.
Design criteria for valve selections: 100 foot line run, 10 foot rise.

LOOSE COMPONENTS REQUIRED FOR A2L MITIGATION CONTROL // AIR DEFROST MODELS

	Model No.	Loose SSOV Mitigation Valve @ Liquid Temp			Loose CSOV Mitigation CV	
		Size	50°F	100°F	Size	Description
6 FPI - R455A	KAV6A050*DA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6A062*DA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6A081*DA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6A088*DA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6A113*DA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6A141*DA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6A159*DA	3/8	SSOV3S130	SSOV6S130	7/8	CSOV-7S
	KAV6A170*DA	3/8	SSOV3S130	SSOV6S130	7/8	CSOV-7S
	KAV6A196*DA	1/2	SSOV3S130	SSOV6S140	7/8	CSOV-7S
	KAV6A220*DA	1/2	SSOV3S130	SSOV6S140	7/8	CSOV-7S
	KAV6A234*DA	1/2	SSOV6S140	SSOV6S140	7/8	CSOV-7S
	KAV6A289*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6A316*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6A375*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6A404*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6A477*DA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S

Note: Liquid line solenoids operate as double duty mitigation controls for A2L leak mitigation system and are required to ship loose and be installed outside the refrigerated space.
Design criteria for valve selections: 100 foot line run, 10 foot rise.

DISTRIBUTOR NOZZLES & EXPANSION VALVES // ELECTRIC DEFROST

	Model No.	Part Numbers						
		Nozzle @ Liq. Temp.		TXV @ Liq. Temp.		EEV @ Liq. Temp		No. of Circuits
		50°F	100°F	50°F	100°F	50°F	100°F	
6 FPI - R454A	KAV6E042DDA	1/3,TYPE L	1/2,TYPE L	SBFTE-AA-Z	SBFTE-AA-Z	SER-AA	SER-AA	2
	KAV6E051DDA	1/3,TYPE L	3/4,TYPE L	SBFTE-AA-Z	SBFTE-AA-Z	SER-AA	SER-AA	2
	KAV6E058DDA	1/3,TYPE L	3/4,TYPE L	SBFTE-AA-Z	SBFTE-A-Z	SER-AA	SER-AA	2
	KAV6E079DDA	1/2,TYPE L	1,TYPE L	SBFTE-AA-Z	SBFTE-A-Z	SER-AA	SER-A	2
	KAV6E092DDA	3/4,TYPE L	1,TYPE L	SBFTE-A-Z	SBFTE-A-Z	SER-A	SER-A	3
	KAV6E110DDA	3/4,TYPE L	1-1/2,TYPE L	SBFTE-A-Z	SBFTE-B-Z	SER-A	SER-A	5
	KAV6E129DDA	1,TYPE L	2,TYPE L	SBFTE-A-Z	SBFTE-B-Z	SER-A	SER-A	6
	KAV6E148DDA	1,TYPE L	2,TYPE L	SBFTE-A-Z	SBFTE-B-Z	SER-A	SER-B	6
	KAV6E173DDA	1-1/2,TYPE L	2-1/2,TYPE L	SBFTE-B-Z	SBFTE-B-Z	SER-A	SER-B	6
	KAV6E194DDA	1-1/2,TYPE L	2-1/2,TYPE L	SBFTE-B-Z	SBFTE-C-Z	SER-A	SER-B	6
	KAV6E218DDA	1-1/2,TYPE L	3,TYPE L	SBFTE-B-Z	SBFTE-C-Z	SER-B	SER-B	8
	KAV6E237*DA	1-1/2,TYPE L	3,TYPE L	SBFTE-B-Z	SBFTE-C-Z	SER-B	SER-B	9
	KAV6E290*DA	2,TYPE L	4,TYPE L	SBFTE-B-Z	SBFTE-C-Z	SER-B	SER-C	9
	KAV6E343*DA	2-1/2,TYPE G	4,TYPE G	SBFTE-C-Z	SBFTE-C-Z	SER-B	SER-C	12
6 FPI - R454C	KAV6E042DDA	1/3,TYPE L	3/4,TYPE L	SBFVE-AA-Z	SBFVE-AA-Z	SER-AA	SER-AA	2
	KAV6E051DDA	1/3,TYPE L	3/4,TYPE L	SBFVE-AA-Z	SBFVE-A-Z	SER-AA	SER-AA	2
	KAV6E058DDA	1/2,TYPE L	3/4,TYPE L	SBFVE-AA-Z	SBFVE-A-Z	SER-AA	SER-AA	2
	KAV6E079DDA	1/2,TYPE L	1-1/2,TYPE L	SBFVE-A-Z	SBFVE-A-Z	SER-AA	SER-A	2
	KAV6E092DDA	3/4,TYPE L	1-1/2,TYPE L	SBFVE-A-Z	SBFVE-B-Z	SER-A	SER-A	3
	KAV6E110DDA	3/4,TYPE L	2,TYPE L	SBFVE-A-Z	SBFVE-B-Z	SER-A	SER-A	5
	KAV6E129DDA	1,TYPE L	2,TYPE L	SBFVE-A-Z	SBFVE-B-Z	SER-A	SER-A	6
	KAV6E148DDA	1,TYPE L	2,TYPE L	SBFVE-B-Z	SBFVE-B-Z	SER-A	SER-B	6
	KAV6E173DDA	1-1/2,TYPE L	2-1/2,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-A	SER-B	6
	KAV6E194DDA	1-1/2,TYPE L	3,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-B	SER-B	6
	KAV6E218DDA	1-1/2,TYPE L	3,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-B	SER-B	8
	KAV6E237*DA	1-1/2,TYPE L	4,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-B	SER-B	9
	KAV6E290*DA	2,TYPE L	4,TYPE L	SBFVE-C-Z	SBFVE-C-Z	SER-B	SER-C	9
	KAV6E343*DA	2-1/2,TYPE G	5,TYPE G	SBFVE-C-Z	EBSVE-7-Z	SER-B	SER-C	12

The distributor lines are 3/16" tube & 14" long.
* Each asterisk represents a variable character based on voltage ordered. See page 4 for nomenclature.
^ TXV selections are based on -20°F suction temp., 8°F to 12°F evaporator TD. Contact factory for operating conditions outside of this range.
Base models (no factory-mounted components) include nozzles sized for 100°F liquid shipped loose.

DISTRIBUTOR NOZZLES & EXPANSION VALVES // ELECTRIC DEFROST

Model No.		Part Numbers						
		Nozzle @ Liq. Temp.		TXV @ Liq. Temp.		EEV @ Liq. Temp		No. of Circuits
		50°F	100°F	50°F	100°F	50°F	100°F	
6 FPI - R455A	KAV6E042DDA	1/3,TYPE L	3/4,TYPE L	SBFVE-AA-Z	SBFVE-AA-Z	SER-AA	SER-AA	2
	KAV6E051DDA	1/3,TYPE L	3/4,TYPE L	SBFVE-AA-Z	SBFVE-A-Z	SER-AA	SER-AA	2
	KAV6E058DDA	1/2,TYPE L	3/4,TYPE L	SBFVE-AA-Z	SBFVE-A-Z	SER-AA	SER-AA	2
	KAV6E079DDA	1/2,TYPE L	1-1/2,TYPE L	SBFVE-A-Z	SBFVE-A-Z	SER-AA	SER-A	2
	KAV6E092DDA	3/4,TYPE L	1-1/2,TYPE L	SBFVE-A-Z	SBFVE-B-Z	SER-A	SER-A	3
	KAV6E110DDA	3/4,TYPE L	2,TYPE L	SBFVE-A-Z	SBFVE-B-Z	SER-A	SER-A	5
	KAV6E129DDA	1,TYPE L	2,TYPE L	SBFVE-A-Z	SBFVE-B-Z	SER-A	SER-A	6
	KAV6E148DDA	1,TYPE L	2,TYPE L	SBFVE-B-Z	SBFVE-B-Z	SER-A	SER-B	6
	KAV6E173DDA	1-1/2,TYPE L	2-1/2,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-A	SER-B	6
	KAV6E194DDA	1-1/2,TYPE L	3,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-B	SER-B	6
	KAV6E218DDA	1-1/2,TYPE L	3,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-B	SER-B	8
	KAV6E237*DA	1-1/2,TYPE L	4,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-B	SER-B	9
	KAV6E290*DA	2,TYPE L	4,TYPE L	SBFVE-C-Z	SBFVE-C-Z	SER-B	SER-C	9
	KAV6E343*DA	2-1/2,TYPE G	5,TYPE G	SBFVE-C-Z	EBSVE-7-Z	SER-B	SER-C	12

The distributor lines are 3/16" tube & 14" long.
* Each asterisk represents a variable character based on voltage ordered. See page 4 for nomenclature.
^ TXV selections are based on -20°F suction temp., 8°F to 12°F evaporator TD. Contact factory for operating conditions outside of this range.
Base models (no factory-mounted components) include nozzles sized for 100°F liquid shipped loose.

LOOSE COMPONENTS REQUIRED FOR A2L MITIGATION CONTROL // ELECTRIC DEFROST MODELS

	Model No.	Loose SSOV Mitigation Valve @ Liquid Temp			Loose CSOV Mitigation CV	
		Size	50°F	100°F	Size	Description
6 FPI - R454A	KAV6E042DDA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6E051DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6E058DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6E079DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6E092DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6E110DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV6E129DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV6E148DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV6E173DDA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6E194DDA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6E218DDA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
	KAV6E237*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
	KAV6E290*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
	KAV6E343*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
6 FPI - R454C	KAV6E042DDA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6E051DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6E058DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6E079DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6E092DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6E110DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV6E129DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV6E148DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV6E173DDA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6E194DDA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6E218DDA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
	KAV6E237*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
	KAV6E290*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
	KAV6E343*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S

Note: Liquid line solenoids operate as double duty mitigation controls for A2L leak mitigation system and are required to ship loose and be installed outside the refrigerated space.
Design criteria for valve selections: 100 foot line run, 10 foot rise.

LOOSE COMPONENTS REQUIRED FOR A2L MITIGATION CONTROL // ELECTRIC DEFROST MODELS

	Model No.	Loose SSOV Mitigation Valve @ Liquid Temp			Loose CSOV Mitigation CV	
		Size	50°F	100°F	Size	Description
6 FPI - R455A	KAV6E042DDA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV6E051DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6E058DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6E079DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6E092DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV6E110DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV6E129DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV6E148DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV6E173DDA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6E194DDA	1/2	SSOV6S140	SSOV6S140	1 1/8	CSOV-9S
	KAV6E218DDA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
	KAV6E237*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
	KAV6E290*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
	KAV6E343*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S

Note: Liquid line solenoids operate as double duty mitigation controls for A2L leak mitigation system and are required to ship loose and be installed outside the refrigerated space.
Design criteria for valve selections: 100 foot line run, 10 foot rise.

DISTRIBUTOR NOZZLES & EXPANSION VALVES // ELECTRIC DEFROST

Model No.		Part Numbers						
		Nozzle @ Liq. Temp.		TXV @ Liq. Temp.		EEV @ Liq. Temp		No. of Circuits
		50°F	100°F	50°F	100°F	50°F	100°F	
4 FPI - R454A	KAV4E032DDA	-	-	SBFTE-AAA-Z	SBFTE-AA-Z	SER-AA	SER-AA	1
	KAV4E040DDA	1/4,TYPE L	1/2,TYPE L	SBFTE-AA-Z	SBFTE-AA-Z	SER-AA	SER-AA	2
	KAV4E046DDA	1/3,TYPE L	3/4,TYPE L	SBFTE-AA-Z	SBFTE-AA-Z	SER-AA	SER-AA	2
	KAV4E061DDA	1/2,TYPE L	3/4,TYPE L	SBFTE-AA-Z	SBFTE-A-Z	SER-AA	SER-AA	2
	KAV4E076DDA	1/2,TYPE L	1,TYPE L	SBFTE-AA-Z	SBFTE-A-Z	SER-AA	SER-A	3
	KAV4E099DDA	3/4,TYPE L	1-1/2,TYPE L	SBFTE-A-Z	SBFTE-B-Z	SER-AA	SER-A	4
	KAV4E114DDA	1,TYPE L	1-1/2,TYPE L	SBFTE-A-Z	SBFTE-B-Z	SER-A	SER-A	6
	KAV4E133DDA	1,TYPE L	2,TYPE L	SBFTE-A-Z	SBFTE-B-Z	SER-A	SER-A	6
	KAV4E150DDA	1,TYPE L	2,TYPE L	SBFTE-A-Z	SBFTE-B-Z	SER-A	SER-B	6
	KAV4E170DDA	1-1/2,TYPE L	,2-1/2,TYPE L	SBFTE-B-Z	SBFTE-B-Z	SER-A	SER-B	8
	KAV4E184*DA	1-1/2,TYPE L	2-1/2,TYPE L	SBFTE-B-Z	SBFTE-C-Z	SER-A	SER-B	9
	KAV4E232*DA	1-1/2,TYPE L	3,TYPE L	SBFTE-B-Z	SBFTE-C-Z	SER-B	SER-B	9
	KAV4E281*DA	2,TYPE G	4,TYPE G	SBFTE-B-Z	SBFTE-C-Z	SER-B	SER-B	12
4 FPI - R454C	KAV4E032DDA	-	-	SBFVE-AAA-Z	SBFVE-AA-Z	SER-AA	SER-AA	1
	KAV4E040DDA	1/4,TYPE L	3/4,TYPE L	SBFVE-AA-Z	SBFVE-AA-Z	SER-AA	SER-AA	2
	KAV4E046DDA	1/3,TYPE L	3/4,TYPE L	SBFVE-AA-Z	SBFVE-AA-Z	SER-AA	SER-AA	2
	KAV4E061DDA	1/2,TYPE L	3/4,TYPE L	SBFVE-AA-Z	SBFVE-A-Z	SER-AA	SER-A	2
	KAV4E076DDA	1/2,TYPE L	1,TYPE L	SBFVE-A-Z	SBFVE-A-Z	SER-AA	SER-A	3
	KAV4E099DDA	3/4,TYPE L	1-1/2,TYPE L	SBFVE-A-Z	SBFVE-B-Z	SER-A	SER-A	4
	KAV4E114DDA	1,TYPE L	2,TYPE L	SBFVE-A-Z	SBFVE-B-Z	SER-A	SER-A	6
	KAV4E133DDA	1,TYPE L	2,TYPE L	SBFVE-A-Z	SBFVE-B-Z	SER-A	SER-B	6
	KAV4E150DDA	1,TYPE L	2,TYPE L	SBFVE-B-Z	SBFVE-B-Z	SER-A	SER-B	6
	KAV4E170DDA	1-1/2,TYPE L	2-1/2,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-A	SER-B	8
	KAV4E184*DA	1-1/2,TYPE L	3,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-B	SER-B	9
	KAV4E232*DA	1-1/2,TYPE L	3,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-B	SER-B	9
	KAV4E281*DA	2,TYPE G	4,TYPE G	SBFVE-C-Z	SBFVE-C-Z	SER-B	SER-C	12
4 FPI - R455A	KAV4E032DDA	-	-	SBFVE-AAA-Z	SBFVE-AA-Z	SER-AA	SER-AA	1
	KAV4E040DDA	1/4,TYPE L	3/4,TYPE L	SBFVE-AA-Z	SBFVE-AA-Z	SER-AA	SER-AA	2
	KAV4E046DDA	1/3,TYPE L	3/4,TYPE L	SBFVE-AA-Z	SBFVE-AA-Z	SER-AA	SER-AA	2
	KAV4E061DDA	1/2,TYPE L	3/4,TYPE L	SBFVE-AA-Z	SBFVE-A-Z	SER-AA	SER-A	2
	KAV4E076DDA	1/2,TYPE L	1,TYPE L	SBFVE-A-Z	SBFVE-A-Z	SER-AA	SER-A	3
	KAV4E099DDA	3/4,TYPE L	1-1/2,TYPE L	SBFVE-A-Z	SBFVE-B-Z	SER-A	SER-A	4
	KAV4E114DDA	1,TYPE L	2,TYPE L	SBFVE-A-Z	SBFVE-B-Z	SER-A	SER-A	6
	KAV4E133DDA	1,TYPE L	2,TYPE L	SBFVE-A-Z	SBFVE-B-Z	SER-A	SER-B	6
	KAV4E150DDA	1,TYPE L	2,TYPE L	SBFVE-B-Z	SBFVE-B-Z	SER-A	SER-B	6
	KAV4E170DDA	1-1/2,TYPE L	2-1/2,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-A	SER-B	8
	KAV4E184*DA	1-1/2,TYPE L	3,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-B	SER-B	9
	KAV4E232*DA	1-1/2,TYPE L	3,TYPE L	SBFVE-B-Z	SBFVE-C-Z	SER-B	SER-B	9
	KAV4E281*DA	2,TYPE G	4,TYPE G	SBFVE-C-Z	SBFVE-C-Z	SER-B	SER-C	12

The distributor lines are 3/16" tube & 14" long.
* Each asterisk represents a variable character based on voltage ordered. See page 4 for nomenclature.
^ TXV selections are based on +20°F suction temp., 8°F to 12°F evaporator TD. Contact factory for operating conditions outside of this range.
Base models (no factory-mounted components) include nozzles sized for 100°F liquid shipped loose.

LOOSE COMPONENTS REQUIRED FOR A2L MITIGATION CONTROL // ELECTRIC DEFROST MODELS

	Model No.	Loose SSOV Mitigation Valve @ Liquid Temp			Loose CSOV Mitigation CV	
		Size	50°F	100°F	Size	Description
4 FPI - R455A	KAV4E032DDA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV4E040DDA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV4E046DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV4E061DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV4E076DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV4E099DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV4E114DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV4E133DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV4E150DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV4E170DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV4E184*DA	1/2	SSOV3S130	SSOV6S140	1 1/8	CSOV-9S
	KAV4E232*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
	KAV4E281*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
4 FPI - R454C	KAV4E032DDA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV4E040DDA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV4E046DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV4E061DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV4E076DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV4E099DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV4E114DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV4E133DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV4E150DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV4E170DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV4E184*DA	1/2	SSOV3S130	SSOV6S140	1 1/8	CSOV-9S
	KAV4E232*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
	KAV4E281*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
4 FPI - R455A	KAV4E032DDA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV4E040DDA	3/8	SSOV3S130	SSOV3S130	5/8	CSOV-5S
	KAV4E046DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV4E061DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV4E076DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV4E099DDA	3/8	SSOV3S130	SSOV3S130	7/8	CSOV-7S
	KAV4E114DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV4E133DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV4E150DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV4E170DDA	3/8	SSOV3S130	SSOV3S130	1 1/8	CSOV-9S
	KAV4E184*DA	1/2	SSOV3S130	SSOV6S140	1 1/8	CSOV-9S
	KAV4E232*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S
	KAV4E281*DA	1/2	SSOV6S140	SSOV6S140	1 3/8	CSOV-11S

Note: Liquid line solenoids operate as double duty mitigation controls for A2L leak mitigation system and are required to ship loose and be installed outside the refrigerated space.
Design criteria for valve selections: 100 foot line run, 10 foot rise.

SPECIFICATIONS // AIR DEFROST MODELS

	Model No.	Fans	Refrigerant Connections		No. of Hanger Slot Locations	Dimensions (Inches)				Estimated Shipping Weight (Lbs.)
			Liquid	Suction		A	B	C	D	
6 FPI - KAV6A	KAV6A050*DA	1	3/8	5/8	2	17-1/4	-	-	27-1/8	41
	KAV6A062*DA	1	3/8	5/8	2	17-1/4	-	-	27-1/8	44
	KAV6A081*DA	1	3/8	5/8	2	17-1/4	-	-	27-1/8	47
	KAV6A088*DA	2	3/8	5/8	2	33-1/4	-	-	43-5/8	52
	KAV6A113*DA	2	3/8	7/8	2	33-1/4	-	-	43-5/8	55
	KAV6A141*DA	2	3/8	7/8	2	33-1/4	-	-	43-5/8	58
	KAV6A159*DA	2	3/8	7/8	2	33-1/4	-	-	43-5/8	62
	KAV6A177*DA	3	3/8	7/8	2	49-1/4	-	-	60-1/8	72
	KAV6A196*DA	3	1/2	7/8	2	49-1/4	-	-	60-1/8	78
	KAV6A220*DA	3	1/2	7/8	2	49-1/4	-	-	60-1/8	85
	KAV6A234*DA	4	1/2	7/8	2	65-1/4	-	-	76-5/8	115
	KAV6A289*DA	4	1/2	1 1/8	2	65-1/4	-	-	76-5/8	124
	KAV6A316*DA	4	1/2	1 1/8	2	65-1/4	-	-	76-5/8	147
	KAV6A375*DA	5	1/2	1 1/8	3	81-1/4	32-5/8	48-5/8	93-1/8	218
	KAV6A404*DA	6	1/2	1 1/8	3	97-1/4	48-5/8	48-5/8	109-5/8	257
	KAV6A477*DA	6	1/2	1 1/8	3	97-1/4	48-5/8	48-5/8	109-5/8	262

* Astericks represents a variable character based on voltage ordered. See Nomenclature on page 4.
TXV Type: Externally Equalized
For units with mounted TXV components, see nozzle/TXV table for distributor connection size when TXV is field supplied.

SPECIFICATIONS // ELECTRIC DEFROST MODELS

	Model No.	Fans	Refrigerant Connections		No. of Hanger Slot Locations	Dimensions (Inches)				Estimated Shipping Weight (Lbs.)
			Liquid	Suction		A	B	C	D	
6 FPI - KAV6E	KAV6E042DDA	1	3/8	5/8	2	17-1/4	-	-	27-1/8	41
	KAV6E051DDA	1	3/8	7/8	2	17-1/4	-	-	27-1/8	44
	KAV6E058DDA	1	3/8	7/8	2	17-1/4	-	-	27-1/8	47
	KAV6E079DDA	2	3/8	7/8	2	33-1/4	-	-	43-5/8	52
	KAV6E092DDA	2	3/8	7/8	2	33-1/4	-	-	43-5/8	55
	KAV6E110DDA	2	3/8	1 1/8	2	33-1/4	-	-	43-5/8	58
	KAV6E129DDA	2	3/8	1 1/8	2	33-1/4	-	-	43-5/8	62
	KAV6E148DDA	3	3/8	1 1/8	2	49-1/4	-	-	60-1/8	78
	KAV6E173DDA	3	1/2	1 1/8	2	49-1/4	-	-	60-1/8	85
	KAV6E194DDA	4	1/2	1 1/8	2	65-1/4	-	-	76-5/8	124
	KAV6E218DDA	4	1/2	1 3/8	2	65-1/4	-	-	76-5/8	147
	KAV6E237*DA	5	1/2	1 3/8	3	81-1/4	32-5/8	48-5/8	93-1/8	195
	KAV6E290*DA	6	1/2	1 3/8	3	97-1/4	48-5/8	48-5/8	109-5/8	238
	KAV6E343*DA	6	1/2	1 3/8	3	97-1/4	48-5/8	48-5/8	109-5/8	262

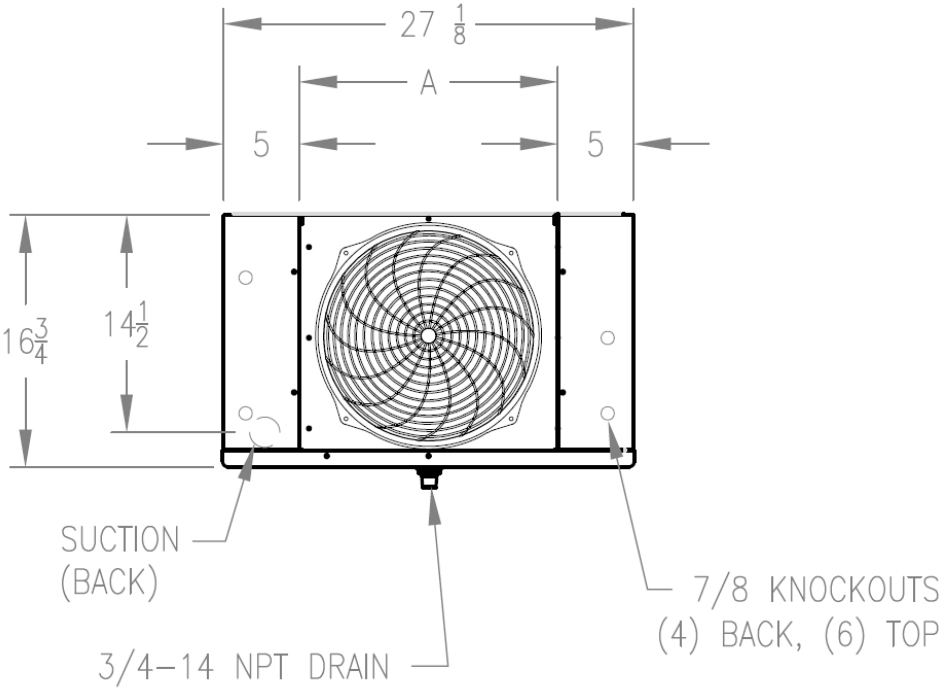
	Model No.	Fans	Refrigerant Connections		No. of Hanger Slot Locations	Dimensions (Inches)				Estimated Shipping Weight (Lbs.)
			Liquid	Suction		A	B	C	D	
4 FPI - KAV4E	KAV4E032DDA	1	3/8	5/8	2	17-1/4	-	-	27-1/8	40
	KAV4E040DDA	1	3/8	5/8	2	17-1/4	-	-	27-1/8	42
	KAV4E046DDA	1	3/8	7/8	2	17-1/4	-	-	27-1/8	46
	KAV4E061DDA	2	3/8	7/8	2	33-1/4	-	-	43-5/8	50
	KAV4E076DDA	2	3/8	7/8	2	33-1/4	-	-	43-5/8	52
	KAV4E099DDA	2	3/8	7/8	2	33-1/4	-	-	43-5/8	55
	KAV4E114DDA	3	3/8	1 1/8	2	49-1/4	-	-	60-1/8	79
	KAV4E133DDA	3	3/8	1 1/8	2	49-1/4	-	-	60-1/8	84
	KAV4E150DDA	4	3/8	1 1/8	2	65-1/4	-	-	76-5/8	124
	KAV4E170DDA	4	3/8	1 1/8	2	65-1/4	-	-	76-5/8	144
	KAV4E184*DA	5	1/2	1 1/8	3	81-1/4	32-5/8	48-5/8	93-1/8	191
	KAV4E232*DA	6	1/2	1 3/8	3	97-1/4	48-5/8	48-5/8	109-5/8	257
	KAV4E281*DA	6	1/2	1 3/8	3	97-1/4	48-5/8	48-5/8	109-5/8	262

* Astericks represents a variable character based on voltage ordered. See Nomenclature on page 4.
TXV Type: Externally Equalized
For units with mounted TXV components, see nozzle/TXV table for distributor connection size when TXV is field supplied.

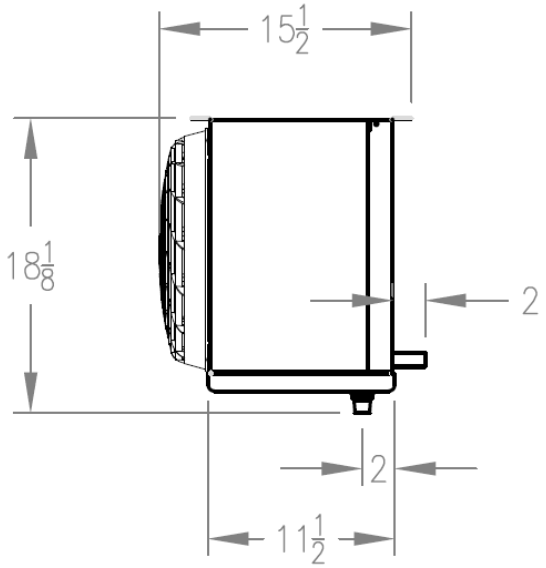
PHYSICAL DIMENSIONS

Figure 1 - Single Fan

Front View



Side View

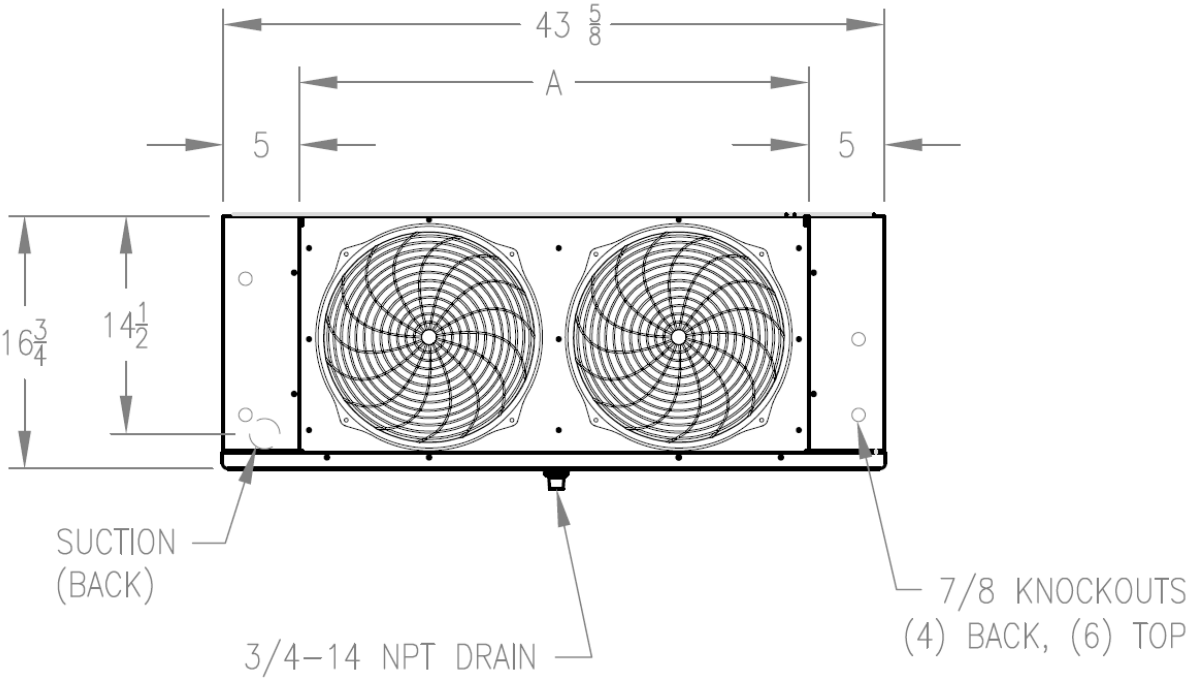


Measurements noted on the end view drawing are the same for all units. All mounting holes are 3/8" diameter.
All dimensions are in inches.

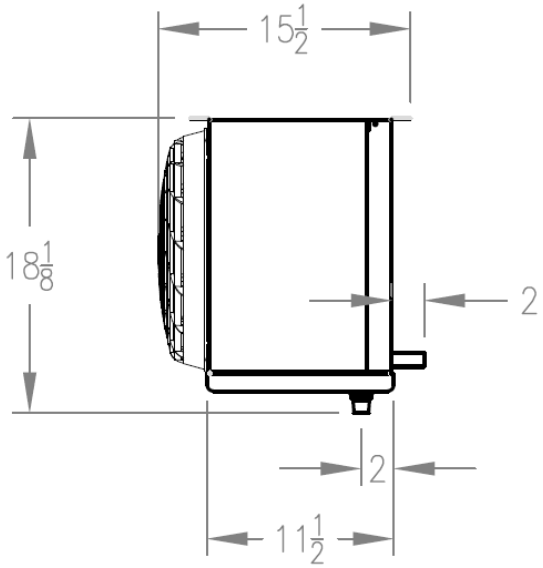
PHYSICAL DIMENSIONS

Figure 2 - Two Fan

Front View



Side View

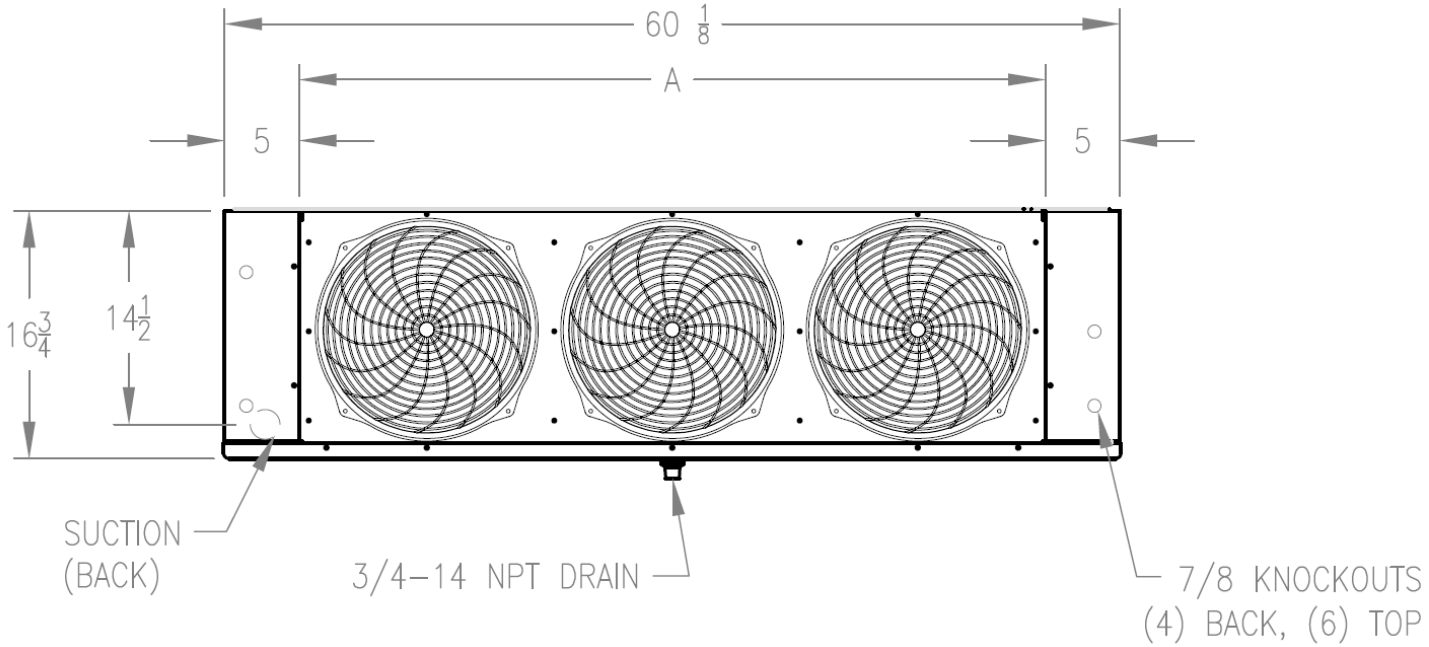


Measurements noted on the end view drawing are the same for all units. All mounting holes are 3/8" diameter.
All dimensions are in inches.

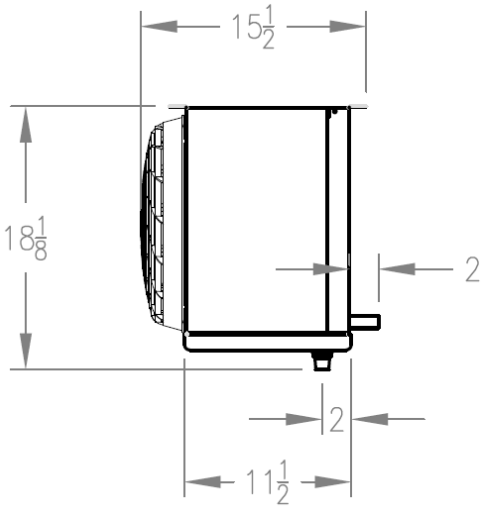
PHYSICAL DIMENSIONS

Figure 3 - Three Fan

Front View



Side View

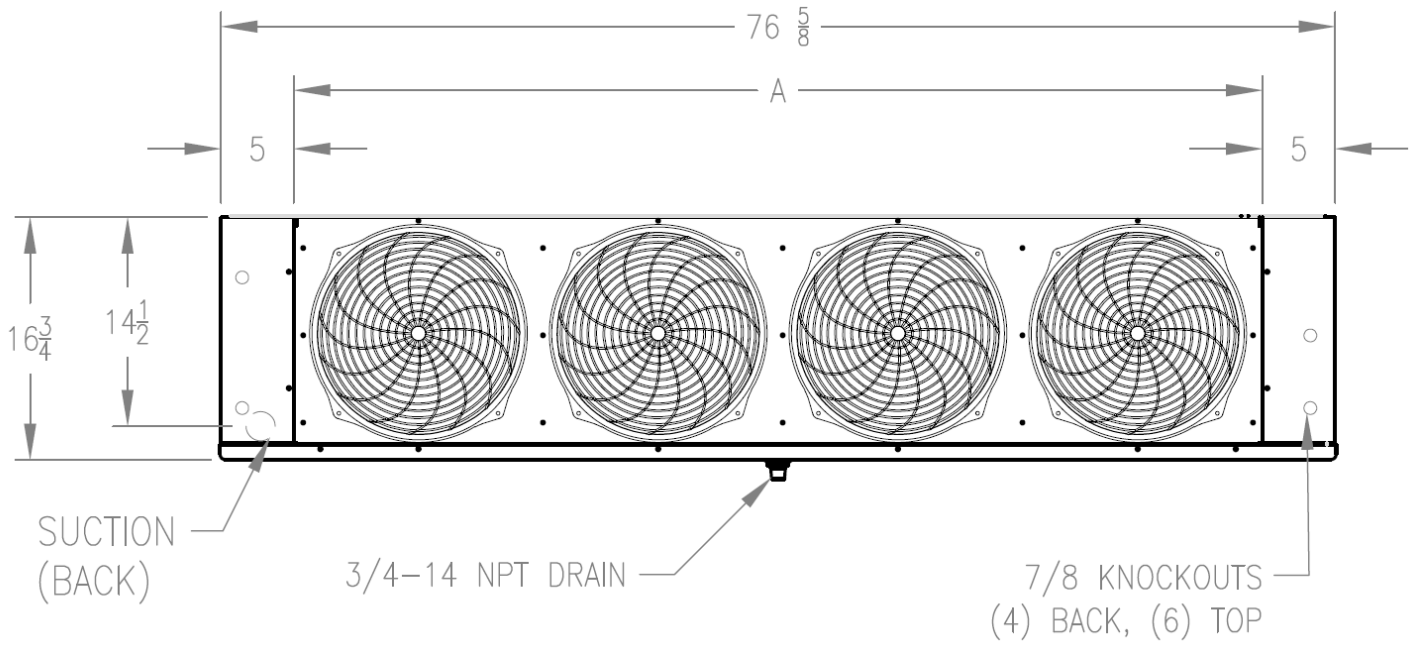


Measurements noted on the end view drawing are the same for all units. All mounting holes are 3/8" diameter.
All dimensions are in inches.

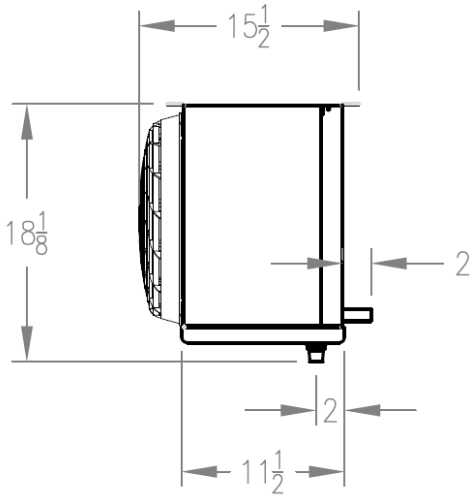
PHYSICAL DIMENSIONS

Figure 4 - Four Fan

Front View



Side View

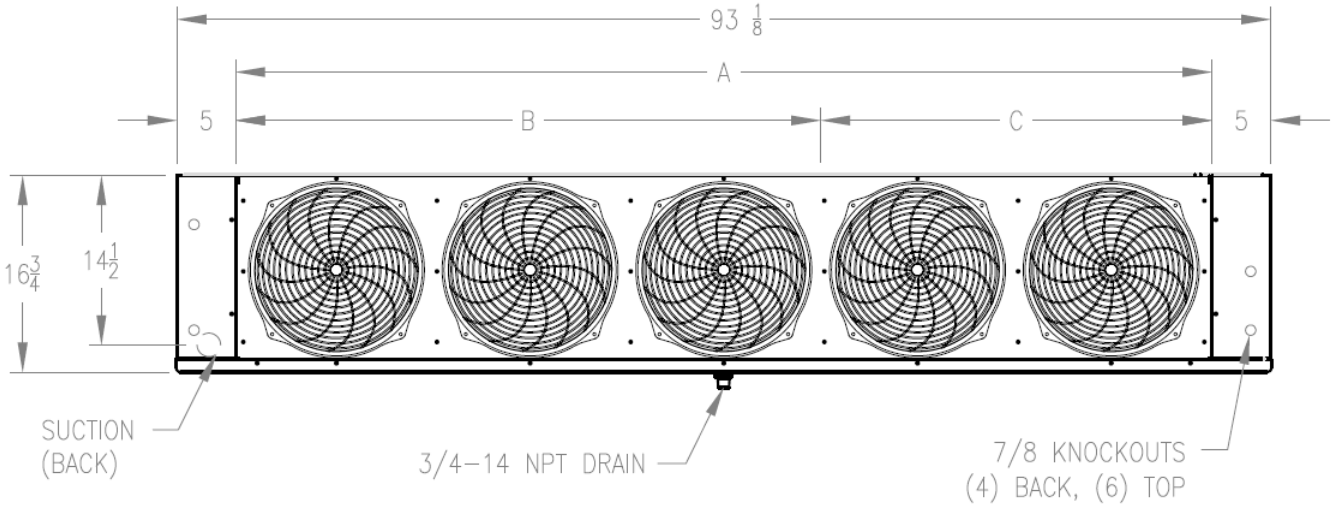


Measurements noted on the end view drawing are the same for all units. All mounting holes are 3/8" diameter.
All dimensions are in inches.

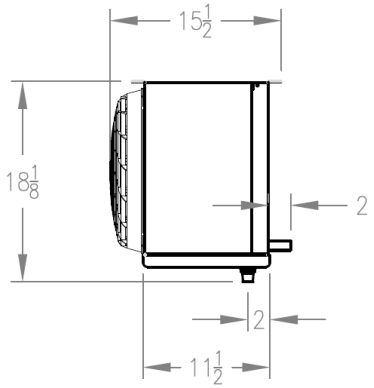
PHYSICAL DIMENSIONS

Figure 5 - Five Fan

Front View



Side View

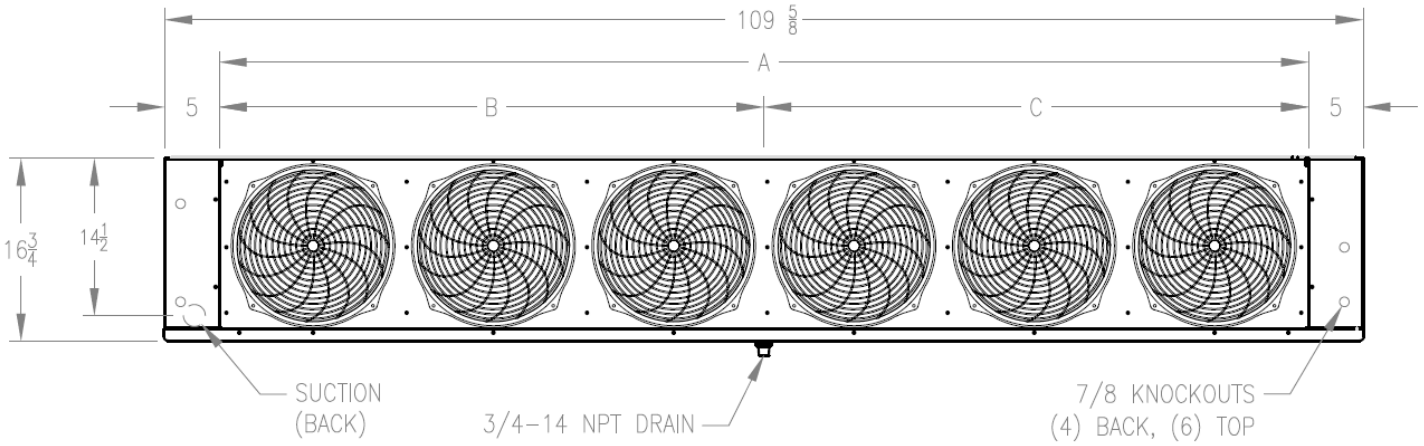


Measurements noted on the end view drawing are the same for all units. All mounting holes are 3/8" diameter.
All dimensions are in inches.

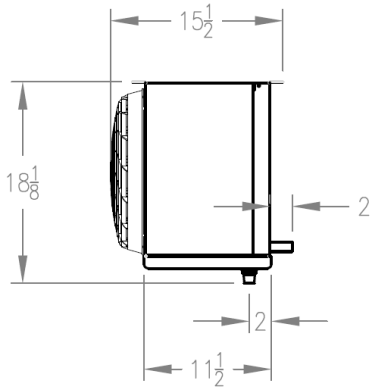
PHYSICAL DIMENSIONS

Figure 6 - Six Fan

Front View



Side View



Measurements noted on the end view drawing are the same for all units. All mounting holes are 3/8" diameter.
All dimensions are in inches.

AWEF RATINGS // COOLER AND FREEZER MODELS

EVAPORATOR APPLICATION RATINGS

Multiple conditions combine to determine the application capacity of an evaporator. Walk-in space temperature, relative humidity, saturated suction temperature difference, and outdoor ambient temperature. All of the factors are considered when calculating an evaporator application rating. These ratings are considerably higher than the net capacity value used for DOE ratings (AWEF).

The AWEF of an evaporator is calculated using the dry coil capacity and the daily evaporator power consumption. Power consumption included fan and defrost power. Evaporator net capacity reported to the DOE database is dry coil capacity less the full power fan watts. DOE test conditions are at 10°F evaporator/SST temperature difference and less than 50% relative humidity and 96°F liquid temperature. These conditions create a uniform test method, but should not be used for equipment selection. The equipment selected would be too large for the application.

Published application ratings are a guideline for proper equipment selection. They account for true operating conditions experienced by equipment.

Department of Energy Walk-in Energy Factors (AWEF) Ratings

Cooler Models - Air and Electric Defrost			
Base Model Number	**Defrost Type**	**FPI**	**AWEF**
KAV6A050*DA	Air Defrost	6	9.00
KAV6A062*DA	Air Defrost	6	9.00
KAV6A081*DA	Air Defrost	6	9.00
KAV6A088*DA	Air Defrost	6	9.00
KAV6A113*DA	Air Defrost	6	9.00
KAV6A141*DA	Air Defrost	6	9.00
KAV6A159*DA	Air Defrost	6	9.00
KAV6A177*DA	Air Defrost	6	9.00
KAV6A196*DA	Air Defrost	6	9.00
KAV6A220*DA	Air Defrost	6	9.00
KAV6A234*DA	Air Defrost	6	9.00
KAV6A289*DA	Air Defrost	6	9.00
KAV6A316*DA	Air Defrost	6	9.00
KAV6A375*DA	Air Defrost	6	9.00
KAV6A404*DA	Air Defrost	6	9.00
KAV6A477*DA	Air Defrost	6	9.00
KAV6E042DDA	Electric Defrost	6	9.00
KAV6E051DDA	Electric Defrost	6	9.00
KAV6E058DDA	Electric Defrost	6	9.00
KAV6E079DDA	Electric Defrost	6	9.00
KAV6E092DDA	Electric Defrost	6	9.00
KAV6E110DDA	Electric Defrost	6	9.00
KAV6E129DDA	Electric Defrost	6	9.00
KAV6E148DDA	Electric Defrost	6	9.00
KAV6E173DDA	Electric Defrost	6	9.00
KAV6E194DDA	Electric Defrost	6	9.00
KAV6E218DDA	Electric Defrost	6	9.00
KAV6E237*DA	Electric Defrost	6	9.00
KAV6E290*DA	Electric Defrost	6	9.00
KAV6E343*DA	Electric Defrost	6	9.00

Department of Energy Walk-in Energy Factors (AWEF) Ratings

Freezer Models - Electric Defrost			
Base Model Number	**Defrost Type**	**FPI**	**AWEF**
KAV6E042DDA	Electric Defrost	6	3.95
KAV6E051DDA	Electric Defrost	6	3.98
KAV6E058DDA	Electric Defrost	6	3.99
KAV6E079DDA	Electric Defrost	6	4.00
KAV6E092DDA	Electric Defrost	6	4.04
KAV6E110DDA	Electric Defrost	6	4.06
KAV6E129DDA	Electric Defrost	6	4.09
KAV6E148DDA	Electric Defrost	6	4.12
KAV6E173DDA	Electric Defrost	6	4.15
KAV6E194DDA	Electric Defrost	6	4.15
KAV6E218DDA	Electric Defrost	6	4.15
KAV6E237*DA	Electric Defrost	6	4.15
KAV6E290*DA	Electric Defrost	6	4.15
KAV6E343*DA	Electric Defrost	6	4.15

Department of Energy Walk-in Energy Factors (AWEF) Ratings

Freezer Models - Electric Defrost			
Base Model Number	**Defrost Type**	**FPI**	**AWEF**
KAV4E032DDA	Electric Defrost	4	3.95
KAV4E040DDA	Electric Defrost	4	3.97
KAV4E046DDA	Electric Defrost	4	3.98
KAV4E061DDA	Electric Defrost	4	3.99
KAV4E076DDA	Electric Defrost	4	4.02
KAV4E099DDA	Electric Defrost	4	4.05
KAV4E114DDA	Electric Defrost	4	4.08
KAV4E133DDA	Electric Defrost	4	4.12
KAV4E150DDA	Electric Defrost	4	4.13
KAV4E170DDA	Electric Defrost	4	4.15
KAV4E184*DA	Electric Defrost	4	4.15
KAV4E232*DA	Electric Defrost	4	4.15
KAV4E281*DA	Electric Defrost	4	4.15

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