

KAAB-007E-CAA

HFC, R-404A, 60 Hz, 1 - Phase, 115 V

Extra-Low Temperature

Production Status: Available for sale to all U.S. customers. Please check with your local Copeland Representative for international availability.

Summary

Performance		
Evaporator Temp. (°F)	-25.00	-40
Condensing Temp. (°F)	105.00	105
Return Gas Temp. (°F)	65.00	65
Liquid Temp. (°F)	105.00	105
Capacity (BTU/hr)	4250	2490
Power (W):	1130	814
Current (Amps):	12	9.2
EER(BTU/Wh):	3.7	3.1
Mass Flow (lbs/hr):	76	44
Sound Data @		
Sound Power (dBA):	Avg	Max
Vibration mils(peak-peak):		4.8 Max
Record Date:	2006-08-07	
Mechanical		
Displacement (in^3/Rev):	4.20	
Displacement (ft^3/Hr):		
Overall Length (in):	14.40	
Overall Width (in):	9.50	
Overall Height (in):	10.40	
Mounting Length (in):	8.20	
Mounting Width (in):	6.40	
Mounting Height (in):	11.20	

Suction Size (in),Type:	5 / 8
Discharge Size (in),Type:	3 / 8
Initial Oil Charge (oz):	22
Oil Recharge (oz):	20
Oil Type:	POE
Net Weight (lbs):	87.0

Internal Free Volume (in^3):

*Overall compressor height on Copeland Brand Product's specified mounting grommets.

Electrical

LRA High* (Amps):	59.8
LRA Low*(Amps):	
LRA Half Winding (Amps):	
MCC (Amps):	14.3
Max Operating Current (Amps):	
RLA, MCC/1.4(use for contactor selection)(Amps):	10.2
RLA, MCC/1.56(use for breaker & wire size selection)(Amps):	9.2
RPM:	1750
Box IP :	
UL File No:	SA-2337
UL File Date:	1984-07-23

*Low and High refer to the low and high nominal voltage ranges for which the motor is approved.

Capacitors

Type	Part No	Low MFD	High MFD	Volts	User Description
Run Capacitor	014-0064-05	25.0	0.0	370	
Run Capacitor	014-0064-11	25.0	0.0	440	
Start Capacitor	014-0061-11	540.0	648.0	110	

Alternate Applications

Refrigerant	Voltage	Phase	Frequency	Application
R-448A HFO	115	1	60	Extra-Low Temperature
R-449A HFO	115	1	60	Extra-Low Temperature

Refrigerant	Voltage	Phase	Frequency	Application
R-507 HFC	115	1	60	Extra-Low Temperature

Service Parts

Service Parts				
Reference	Component	Quantity	Description	Comment
99	003-0692-00	1	PLATE-BOTTOM	
99	005-0010-00	1	COVER-TERMINAL BOX	
99	005-0474-00	1	COVER-STATOR	
99	013-0146-00	1	SCREEN-STRAINER	SUCTION
99	020-0003-09	1	GASKET-O RING	BOTTOM PLATE
99	020-0096-02	1	GASKET-STATOR COVER	
99	020-0107-02	1	GASKET-HOUSING COVER	
99	020-0920-01	1	GASKET-CYLINDER HEAD	
99	020-0958-03	1	GASKET-VALVE PLATE	
99	020-1224-01	2	GASKET-SERVICE VALVE	SUCTION & DISCHARGE

Accessories

Accessories		
Category	Part Number	Description
Electrical Components	085-0160-00	3 Phase Voltage Monitor. For use with all Copeland 3 Phase Compressors. Consult model family nomenclature for electrical definition in the model number.
Miscellaneous	998-AB52-01	Akylbenzene Oil. Approved for use with specific Copeland Semi Hermetic After Market Compressors. Consult model family nomenclatures for oil identifier in the model number.

Category	Part Number	Description
Crankcase Heaters	918-0118-05	Crankcase Heater Kit, 120V, 50W, bolt on. For usage on Copeland H & K Compressors.
Crankcase Heaters	918-0118-06	Crankcase Heater Kit, 240V, 50W, bolt on. For usage on Copeland H & K Compressors.
Crankcase Heaters	918-0118-03	Crankcase Heater Kit, 460V, 50W, bolt on. For usage on Copeland H & K Compressors.
Miscellaneous	998-0050-02	Fan Assembly, 208/230-1-50/60 2HP. Horizontal fan assembly to blow on compressor side, replacement motor 050-0259-13.
Miscellaneous	998-0050-00	Fan Assembly, 208/230-1-50/60, 1-1 1/2 HP. Horizontal fan assembly to blow on compressor side, replacement motor 050-0259-13.
Miscellaneous	998-0050-03	Fan Assembly, 440-1-50/60, 2 HP. Horizontal fan assembly to blow on compressor side, replacement motor 050-0259-14.
Miscellaneous	024-0160-00	Fan Guard, (Horizontal Fan)
Miscellaneous	998-E022-01	Polyol Ester Oil. Approved for use with specific Copeland Hermetic & Semi Hermetic models. Consult specific model family nomenclatures for oil identifier in the model number.

Electrical Components

Electrical Components	
External Protector Part No: 071-0099-00 Usage Description: EXTERNAL PROTECTOR	
Stator Part No: 046-2030-15 Usage Description: Stator Resistance: +/-7% Start Wdg: 1.40 Run Wdg: 0.59	Potential Part No: 040-0166-08 Usage Description: Potential Relay <u>Vendor Part Number</u> RVA7AD6D-931 <u>Vendor Name</u> ELECTRICA
Part No: 014-0061-11 Low MFD: 540.0 Type:Start Capacitor High MFD: 648.0	Run Capacitor Part No: 014-0064-05 Low MFD: 25.0 Type:Run Capacitor

Usage Description:	High MFD: 0.0
Volts: 110	Usage Description: Run Capacitor
	Volts: 370
Run Capacitor	
Part No: 014-0064-11	
Low MFD: 25.0	
Type:Run Capacitor	
High MFD: 0.0	
Usage Description: Run Capacitor	
Volts: 440	

Nomenclature

KAAB-007E-CAA
Family Series
K: Semi-Hermetic
Application Range
A: Air Cooled
Displacement and Valve Plate
A: Displacement A
Model Variation
B: B
Oil Type
E: POE Oil
Motor Type
C: 1 Phase / Capacitor Run- Capacitor Start
Motor Protection
A: External Inherent Protection—One Protector, (Line Break) Use with Contactor
Voltage
A: 60Hz (115-1) 50Hz (-)

Miscellaneous

Alternate Application				
Refrigerant	Freq	Phase	Voltage	Application
HFC R-507	60	1 Ø	115 V	R5 XL
HFO R-448A	60	1 Ø	115 V	R5 XL
HFO R-449A	60	1 Ø	115 V	R5 XL

Bill-of-Materials

KAAB-007E-CAA - BILL OF MATERIALS

100 - Common U.S. OEM Bill Of Materials

Suction Connection	Flare
Suction Size	5/8"
Discharge Connection	Flare
Discharge Size	3/8"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

103 - Common U.S. OEM Bill Of Materials

Suction Connection	Flare
Suction Size	5/8"
Discharge Connection	Flare
Discharge Size	3/8"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	

Reference Drawing

200 - Common U.S. OEM Bill Of Materials

Suction Connection	Flare
Suction Size	5/8"
Discharge Connection	Flare
Discharge Size	3/8"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	

Reference Drawing [497-0022-00-01.v01.pdf](#)

213 - Common U.S. OEM Bill Of Materials

Suction Connection	Flare
Suction Size	5/8"
Discharge Connection	Flare
Discharge Size	3/8"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	

Reference Drawing

220 - Common U.S. OEM Bill Of Materials

Suction Connection	Flare
Suction Size	5/8"

Discharge Connection	Flare
Discharge Size	3/8"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

221 - Common U.S. OEM Bill Of Materials

Suction Connection	FR
Suction Size	5/8"
Discharge Connection	FR
Discharge Size	3/8"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

224 - Common U.S. OEM Bill Of Materials

Suction Connection	FR
Suction Size	5/8"
Discharge Connection	FR
Discharge Size	3/8"
Electrical Connection	
Mounting Assembly	Not Available

Sight Glass
Crankcase Heater
Schrader Valve
Tandem Ready
Module Voltage
Reference Drawing

226 - Common U.S. OEM Bill Of Materials

Suction Connection	FR
Suction Size	5/8"
Discharge Connection	FR
Discharge Size	3/8"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

227 - Common U.S. OEM Bill Of Materials

Suction Connection	Flare
Suction Size	5/8"
Discharge Connection	Flare
Discharge Size	3/8"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	

Module Voltage

Reference Drawing

228 - Common U.S. OEM Bill Of Materials

Suction Connection	FR
--------------------	----

Suction Size	5/8"
--------------	------

Discharge Connection	FR
----------------------	----

Discharge Size	3/8"
----------------	------

Electrical Connection

Mounting Assembly	Not Available
-------------------	---------------

Sight Glass

Crankcase Heater

Schrader Valve

Tandem Ready

Module Voltage

Reference Drawing

230 - Common U.S. OEM Bill Of Materials

Suction Connection	Flare
--------------------	-------

Suction Size	5/8"
--------------	------

Discharge Connection	Flare
----------------------	-------

Discharge Size	3/8"
----------------	------

Electrical Connection

Mounting Assembly	Not Available
-------------------	---------------

Sight Glass

Crankcase Heater

Schrader Valve

Tandem Ready

Module Voltage

Reference Drawing

231 - Common U.S. OEM Bill Of Materials

Suction Connection	Flare
--------------------	-------

Suction Size	5/8"
Discharge Connection	Flare
Discharge Size	3/8"
Electrical Connection	Terminal Block
Mounting Assembly	Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

800 - Common U.S. Service Bill Of Materials

Suction Connection	Flare
Suction Size	5/8"
Discharge Connection	Flare
Discharge Size	3/8"
Electrical Connection	Terminal Block
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

8R0 - Common U.S. Service Bill Of Materials

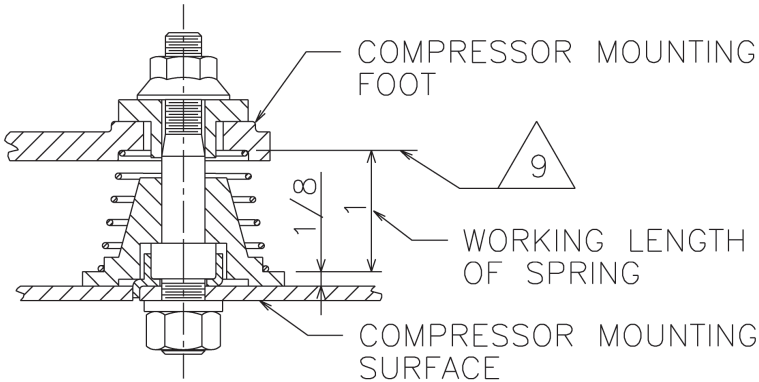
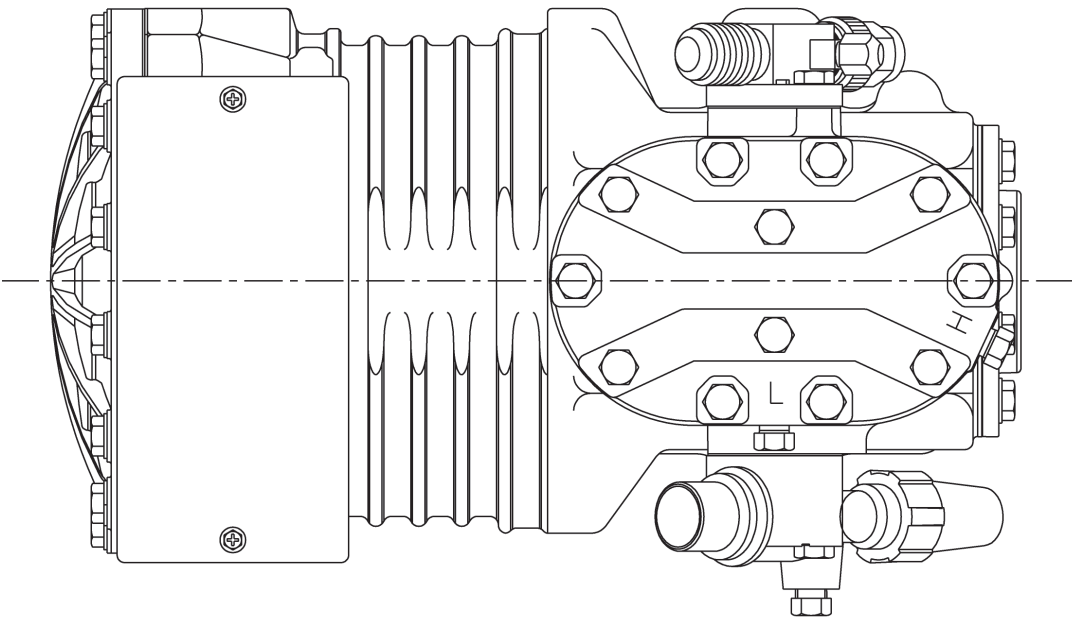
Suction Connection	Flare
Suction Size	5/8"
Discharge Connection	Flare
Discharge Size	3/8"
Electrical Connection	

Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

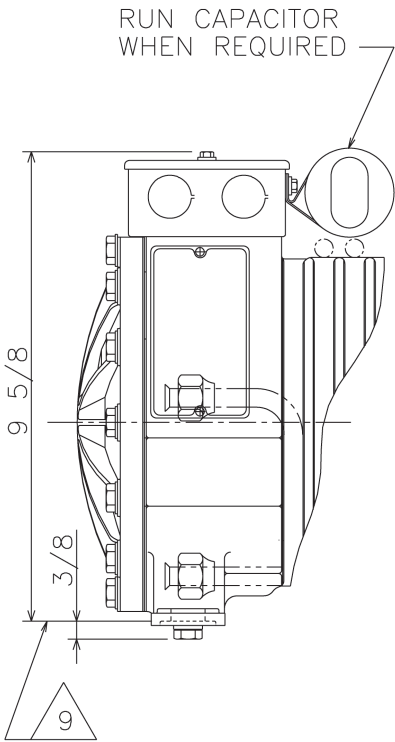
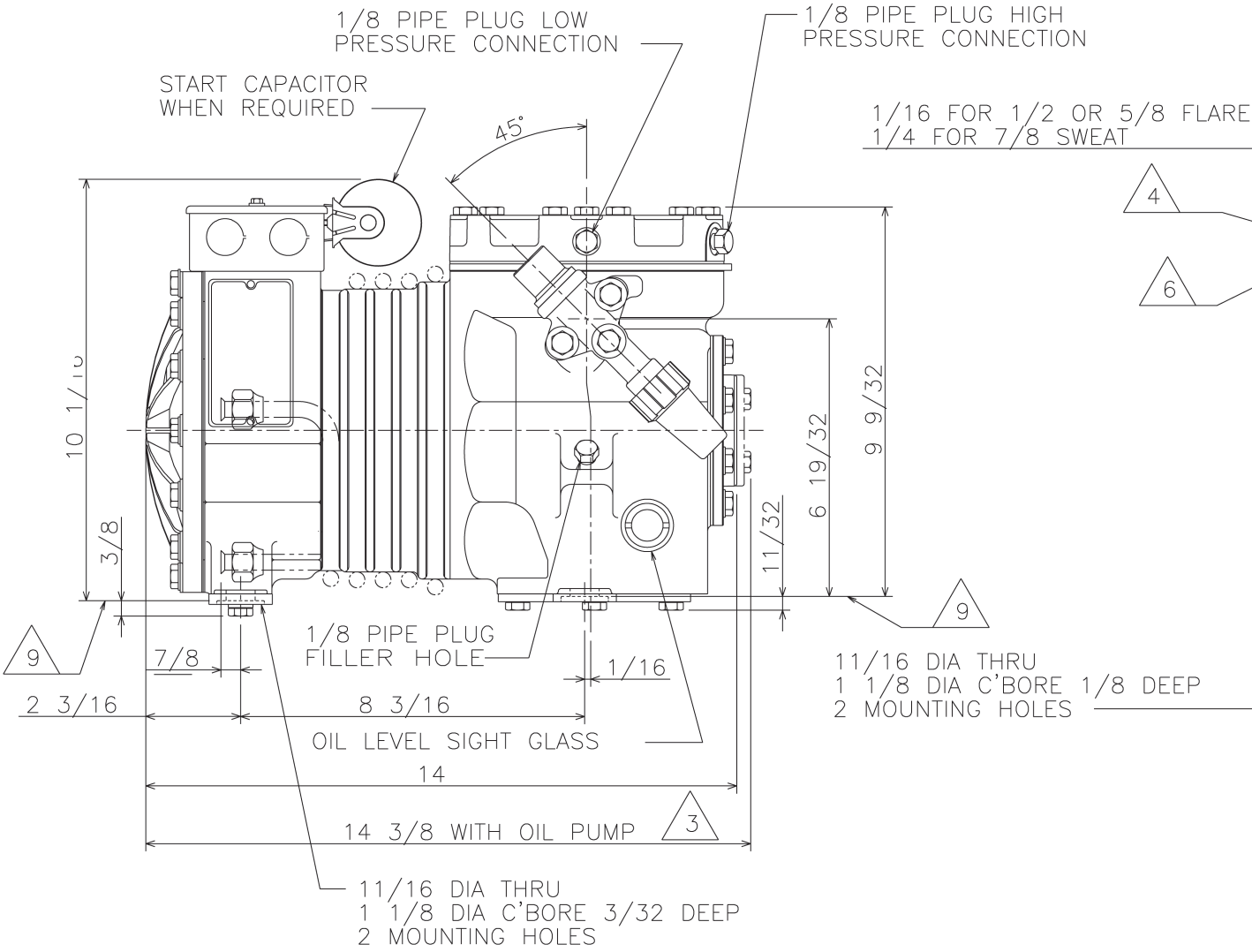
8S0 - Common U.S. Service Bill Of Materials

Suction Connection	Flare
Suction Size	5/8"
Discharge Connection	Flare
Discharge Size	3/8"
Electrical Connection	
Mounting Assembly	Not Available
Sight Glass	
Crankcase Heater	
Schrader Valve	
Tandem Ready	
Module Voltage	
Reference Drawing	

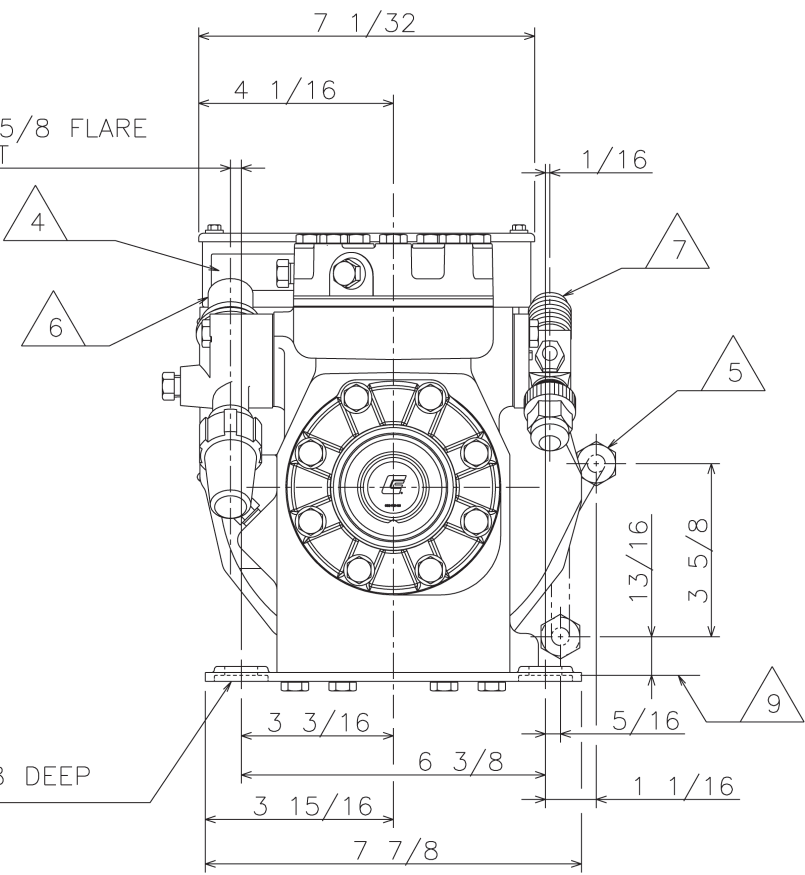
MODEL	3
KA*	
KAD*	
KA*	
KAG*	
KAH*	
KAJ*	
KAK*	
KAL*	
KAM*	
KAN*	
KAR*	
KAT*	



COMPRESSOR MOUNTING PARTS



- NOTES:
- VALVE DIRECTION CAN BE STEM UP OR STEM DOWN.
 - 1 1/2 HORSEPOWER AND ABOVE ARE STANDARD WITH OIL PUMP.
 - ALL COMPRESSORS WITH OIL PUMP ARE INDICATED BY AN ALPHABETICAL CHARACTER IN THE FOURTH DIGIT.
 - PLACE CUSTOMER PART NUMBER IN APPROXIMATE LOCATION SHOWN, WHEN REQUIRED.
 - WATER COIL OPTIONAL, WATER INLET AND OUTLET 3/8 FLARE.
 - SUCTION VALVE: 1/2 FLARE, 5/8 FLARE OR 7/8 SWEAT,
 - DISCHARGE VALVE: 3/8 FLARE, 1/2 FLARE OR 5/8 FLARE.
 - ALL TOLERANCES ARE ±3/32 EXCEPT INDUSTRY STANDARDS APPLY TO FITTINGS AND VALVES.
 - MOUNTING SPRING SURFACE.



31-0807-055	25	HOUSING COVER PICTORIALY REVISED	10-31-08	VSK	WF	
31-0907-049	24	REDRAWN; CHG FORMAT FOR PROJECT INC	11-22-07	MMB	CHK	RST
10-0973-011	0	RELEASED	09-17-73	SL		
ENG NOTICE NO.	REV.NO.	REVISIONS	DATE	BY	CHKD	APPR
8		CONFIDENTIALITY NOTICE THIS DRAWING AND INFORMATION CONTAINED HEREIN ARE THE EXCLUSIVE PROPERTY OF EMERSON CLIMATE TECHNOLOGIES, INC. AND SHALL BE RETURNED UPON DEMAND AND SHALL NOT BE REPRODUCED IN WHOLE OR IN PART TO ANYONE ELSE OR USED, WITHOUT THE WRITTEN CONSENT OF EMERSON CLIMATE TECHNOLOGIES, INC.				
MATERIAL SPECIFICATION		DRAWN BY	SUPERSEDES DWG. NO. / REV. NO.			
N/A		MMB	497-0022-00 / 23			
		DATE	SCALE	DATE FORMAT:		
		11-22-07	1:2	MM-DD-YY		
TITLE			DRAWING NUMBER SHEET 1 OF 2		DWG	SIZE
REF DWG-COPE COMP ASSM			497-0022-00		4	

INTERPRET PER ASME Y14.5M-1994 AND EMERSON CLIMATE TECHNOLOGIES, INC. DESIGN STANDARDS DS2002
 DO NOT SCALE DRAWING
 THIRD ANGLE PROJECTION
 UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE INCH OR [MILLIMETER]
 TOLERANCES:
 2-PLACE ± N/A
 3-PLACE ± N/A
 ANGULAR ± N/A