

Installation Instructions Oversize Motor Kit

Model Number:	Used With:
BAYHSMT082*	T/YSC072H3,4
BAYHSMT083*	T/YSC072HW
BAYHSMT086*	T/SC090H3,4, T/YSC092H3,4, T/YSC102H3,4
BAYHSMT087*	T/SC090HW, T/YSC092HW, T/YSC102HW
BAYHSMT400*	WSC090H3,4, WSC102H3,4
BAYHSMT401*	WSC090HW, WSC102HW
BAYHSMT402*	T/YHC072F3,4
BAYHSMT403*	WSC072H3,4
BAYHSMT404*	WSC072HW
BAYHSMT096*	(T,Y,W)SC072BD
BAYHSMT097*	(T,Y,W)SC090BD, (T,Y,W)SC090ED (T,Y)SC102BD, (T,Y)SC102ED

SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

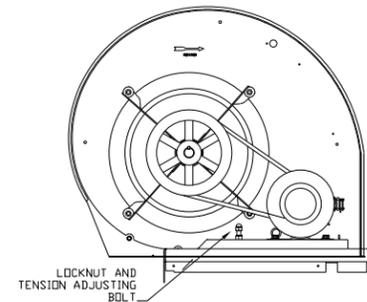
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Figure 1.



1. Remove evaporator access panel.
 2. Loosen the locknut and tension adjustment bolt on the motor plate assembly and remove the belt. A belt tightening instruction label is glued to the motor mounting plate.
 3. Remove the fan sheave.
- Note:** The lead wires must be removed from the standard motor for use on the oversized motor.
4. The motor leads must be disconnected from the motor prior to removing the motor. Disconnect the leads from the motor and leave them in place. Remove and retain the wire ties which secure the motor wires to the cabinet.
 5. To disconnect the wire leads from the motor, the metal plate on the end of the motor must be removed. Loosen the screw securing the green ground screw and pull the remaining flag terminals free. Once the wires are free, loosen the screws of the wire connector where the lead wires enter the motor. Lead wires can now be pulled free of the motor.
 6. Remove the four (4) motor securing bolts from the motor base plate and slide the motor out.

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Warnings, Cautions, and Notices

Read this manual thoroughly before operating or servicing this unit. Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

- WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- CAUTION** Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
- NOTICE** Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs such as HCFCs and HFCs.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

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WARNING

Proper Field Wiring and Grounding Required!
Failure to follow code could result in death or serious injury. All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state electrical codes.

WARNING

Personal Protective Equipment Required!
Installing/servicing this unit could result in exposure to electrical, mechanical and chemical hazards. Before installing/servicing this unit, technicians MUST put on all Personal Protective Equipment (PPE) recommended for the work being undertaken. ALWAYS refer to appropriate SDS sheets and OSHA guidelines for proper PPE. When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS sheets and OSHA guidelines for information on allowable personal exposure levels, proper respiratory protection and handling recommendations. If there is a risk of arc or flash, technicians MUST put on all necessary Personal Protective Equipment (PPE) in accordance with NFPA70E for arc/flash protection PRIOR to servicing the unit. Failure to follow recommendations could result in death or serious injury.

WARNING

Follow EHS Policies!
Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

General Information

The oversized motor accessory should be used when additional CFM and/or static pressure is required.

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NOTICE

Equipment Damage!
Proper adjustment of the fan belt is important to ensure optimal unit operation. Over tightening or under tightening the fan belt can result in belt slippage and excessive wear, bearing damage, sheave misalignment, and possible failure of fan motor mounts.

14. Adjust the tension of the fan belt. The correct operating tension for a "V"-belt fan drive is the lowest tension at which the belt will not slip under peak load conditions. The locknut should be tightened sufficiently to ensure that the motor plate assembly maintains the desired belt tension.

Note: Since new "V"-belts tend to "stretch" after having been placed in operation, recheck the tension of the belt periodically.

15. Remove the metal plate on the end of the replacement motor and install and connect the lead wires (removed earlier in Step 6). Secure with the wire connector leading into the motor and replace the metal plate.

WARNING

Live Electrical Components and Moving Parts!
Failure to follow recommendations could result in death or serious injury. During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components and moving parts. Do not touch any electrical or moving parts. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks.

16. Being careful not to touch any electrical or moving parts, close the unit disconnect switch and check the unit supply fan for proper rotation, alignment, and minimum vibration. (An arrow indicating the direction of rotation is stamped into the fan housing.)

Note: If the supply fan is rotating backwards, open the unit disconnect switch, remove the metal plate on the motor, and reverse any two (2) of the motor leads inside the motor.

17. Replace any wire ties (removed in Step 5) used to secure the motor leads to the cabinet.
18. Replace the access panel.
19. Close the unit disconnect switch.

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Inspection

1. Inspect the shipping carton and its contents. Check for concealed damage before it is stored or used. If damaged, it should be reported to, and claims made against the transportation company. Replace damaged parts with authorized parts only.
2. Compare the accessory model number on the shipping label with the accessory identification on the ordering and shipping document(s) to verify that the correct parts have been received.

Note: Since the same oversized motor kits are used with many different units, some will contain parts that won't be used every time. Therefore refer to Table 1 to determine which parts will be replaced in a particular motor kit installation. Then refer to Table 2 to determine the correct parts. Table 2 shows the proper drive components of units that have been converted to oversized motors.

Installation

WARNING

Hazardous Voltage w/Capacitors!
Failure to disconnect power and discharge capacitors before servicing could result in death or serious injury. Disconnect all electric power, including remote disconnects and discharge all motor start/run capacitors before servicing. Follow proper lockout/tagout procedures to ensure the power cannot be inadvertently energized. Verify with an appropriate voltmeter that all capacitors have discharged.

WARNING

Rotating Components!
Failure to disconnect power before servicing could result in death or serious injury. Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized.

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Table 1. Parts replaced during kit installation

Unit	Motor	Motor Sheave	Fan Sheave	Belt
T/YSC072H	X	X	X	
T/YHC072F	X	X	X	X
WSC072H	X	X	X	X
T/YSC090H	X	X	X	X
WSC090H	X	X	X	X
WSC102H	X	X	X	X
T/YSC092H	X	X	X	
T/YSC102H	X	X	X	
(T,Y,W)SC072BD	X	X		
(T,W)SC090BD	X		X	X
YSC090BD	X	X	X	X
TSC102BD	X		X	X
YSC102BD	X	X	X	X
(T,Y,W)SC090ED	X	X	X	X
(T,Y)SC102ED	X	X	X	X

Table 2. Oversized motor parts for each unit

Kit	Voltage	Motor	Motor Sheave	Fan Sheave	Belt
BAYHSMT082*	208-230/ 460/60/3	2.0 HP	1VL44x7/8"	AK56x1.0	N/A
BAYHSMT083*	575/60/3	2.0 HP	1VL44x7/8"	AK56x1.0	N/A
BAYHSMT086*	208-230/ 460/60/3	3.0 HP	1VL44x7/8"	AK56x1.0	N/A
BAYHSMT087*	575/60/3	3.0 HP	1VL44x7/8"	AK56x1.0	N/A
BAYHSMT400*	208-230/ 460/60/3	3.0 HP	1VL44x7/8"	AK64x1.0	AX35
BAYHSMT401*	575/60/3	3.0 HP	1VL44x7/8"	AK64x1.0	AX35
BAYHSMT402*	208-230/ 460/60/3	2.0 HP	1VL40x7/8"	AK56x1.0	AX35
BAYHSMT403*	208-230/ 460/60/3	2.0 HP	1VL40x7/8"	AK44x1.0	AX29
BAYHSMT404*	575/60/3	2.0 HP	1VL40x7/8"	AK44x1.0	AX29
BAYHSMT096*	200, 380-415/50/3	1.49 kW (2.0 HP)	1VP50 x 7/8"	no change	no change
BAYHSMT097*	200, 380-415/50/4	2.24 kW (3.0 HP)	no change	AK/BK85 x 1"	AX/BX35
BAYHSMT097*	200, 380-415/50/5	2.24 kW (3.0 HP)	1VL40 x 7/8"	AK/BK85 x 1"	AX/BX35
BAYHSMT097*	200, 380-415/50/6	2.24 kW (3.0 HP)	no change	AK/BK85 x 1"	AX/BX38
BAYHSMT097*	200, 380-415/50/7	2.24 kW (3.0 HP)	1VL40 x 7/8"	AK/BK85 x 1"	AX/BX38
BAYHSMT097*	200, 380-415/50/8	2.24 kW (3.0 HP)	1VL40 x 7/8"	AK/BK85 x 1"	AX/BX35
BAYHSMT097*	200, 380-415/50/9	2.24 kW (3.0 HP)	1VL40 x 7/8"	AK/BK85 x 1"	AX/BX38

Table 3. Oversize motor & drive fan speed (rpm), 60 Hz units

Model	5 Turns	4 Turns	3 Turns	2 Turns	1 Turn	Closed
T/YSC072H	958	1022	1086	1150	1214	1278
T/YHC072F	885	948	1010	1073	1135	1198
WSC072H	1110	1183	1256	1329	1402	1475
T/YSC090H	958	1022	1086	1150	1214	1278
WSC090H	835	890	946	1002	1057	1113
T/YSC092H	860	910	960	1010	1060	1110
T/YSC102H	998	1050	1103	1155	1207	1260

Table 4. Oversize motor & drive fan speed (rpm), 50 Hz units

Model	6 Turns	5 Turns	4 Turns	3 Turns	2 Turns	1 Turn	Closed
(T,Y,W)SC072BD	N/A	967	1021	1075	1128	1186	1235
(T,Y,W)SC090BD	1112	1182	1252	1322	1392	1460	N/A
(T,Y,W)SC090ED	1186	1249	1311	1373	1436	N/A	N/A
(T,Y)SC102BD	N/A	971	1041	1111	1181	1251	1321
(T,Y)SC102ED	1036	1093	1151	1208	1266	1323	N/A

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