

Installer's Guide

High Altitude Conversion Kit

18-CH36D1-11A-EN



For *UC, *DC, *UX, *DX, *UY, *DY, *UH, *DH, M951, and M952 Furnace Models

* May be "A", "C" or "T"

Models:

BAYSWT01AHALTA, BAYSWT02AHALTA, BAYSWT03AHALTA, BAYSWT04AHALTA, BAYSWT05AHALTA, BAYSWT06AHALTA, BAYSWT07AHALTA, BAYSWT08AHALTA, BAYSWT09AHALTA, BAYSWT10AHALTA, BAYSWT11AHALTA, BAYSWT12AHALTA

ALL phases of this installation must comply with NATIONAL, STATE AND LOCAL CODES

IMPORTANT-This document is customer property and is to remain with this unit. Please return to service information pack upon completion of work.

WARNING

This conversion kit shall be installed by a qualified service agency in accordance with the furnace manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, an explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of the kit. The installation is not proper and complete until the operation of the converted furnace is checked as specified in the furnace manufacturer's instructions supplied with the kit.

A. GENERAL

These high altitude conversion kits are to be used only with furnace model numbers *UC, *DC, *UX, *DX, *UY, *DY, *UH, *DH, and M95. Conversion kit is for use with natural or LP gas furnaces.

These instructions describe the conversion of these furnaces for installations exceeding an altitude of 4000 feet above sea level.

Due to the lower density of air at higher altitudes, there would be insufficient negative pressure developed by the induced draft blower to maintain normal operation. Therefore, to compensate for the less dense air, pressure switches must be changed to prevent nuisance lockouts and/or cycling of the induced draft blower on high speed. Please note that with the reduced firing input rates required for high altitude installations, the induced draft blower has ample capacity to provide sufficient combustion air for proper and safe operation. **Refer to the National Fuel Gas Code, Section 8.1.2 and Appendix F, for information regarding the correct procedure to derate the furnace's input.** The following instructions must be followed to convert these furnaces for high altitude applications.

B. CONVERSION

CAUTION

Before proceeding with the conversion, the gas supply shall be shut off prior to disconnecting the electrical power.

These instructions below apply to *UC, *DC, *UX, *DX, *UY, *DY, *UH, *DH, M951, and M952 furnace product lines.

1. Check for damage to kit contents, and check for all items listed in Table 1 on page 2.
2. Disconnect electrical supply to furnace.
3. Remove the wiring connections from the pressure switch(es) in the furnace. Mark the wires if needed to properly identify the replacement. On the *UHM/*DHM models only, remove the wires from pressure switches PS-2 and PS-3.
4. Remove the pressure switch(es) sample tube from the switch assembly. On the *UHM/*DHM models only, remove the tubes from pressure switches PS-2 and PS-3.
5. Remove the pressure switch(es) from the furnace. On the *UHM/*DHM models only, remove pressure switches PS2 and PS-3.
6. Install the new pressure switch in the same location and manner as the old pressure switch. On the *UHM/*DHM models only, install the replacement pressure switches PS-2 and PS-3. The PS-1 pressure switch does not need to be changed.
7. Connect the pressure switch sample tube and electrical connections.
8. Reconnect the electrical supply to the furnace.

C. CHECKOUT

Adjust input rate, manifold pressure, and install correct main burner gas orifice according to the furnace Installer's Guide. On the *UHM/*DHM models, maintain the low fire manifold pressure at 0.7" W.C. \pm 0.2" W.C. for Natural Gas or 2.1" W.C. \pm 0.5" W.C. for LP gas applications. Fill out the information on the conversion label (part number A343079P01) and attach the label to the exterior of the furnace door. Once the furnace has been correctly rated for the high altitude installation, and the pressure switch has been changed, the furnace installation shall be checked for proper installation and performance. Refer to the furnace Installer's Guide for checkout procedure.

D. NOTES

1. The use of high altitude calibrated pressure switches in sea level applications is not permitted.
2. The high altitude pressure switches are factory calibrated and sealed. Field adjustment is not permitted. If the factory seal is broken, the product warranty may be voided.

Table 1. Kit Contents

Kit Model No.	Furnace Models	Contents - Pressure Switch
BAYSWT01AHALTA	*UC/*UX1B040A9241, *DC/*DX1B040A9241 *UC/*UX1D100A9601, *UX/*DX1B040A9H21 *UH1B040, *DH1B040, *DH1C085, M951P040BU M951P040BD, M951P085CD	C342634P25
BAYSWT02AHALTA	*UC/*UX1B060A9361, *UX1B060A9H31	C342634P26
BAYSWT03AHALTA	*UC/*UX1B080A9421, *UX1B080A9H31	C342634P36
BAYSWT04AHALTA	*UC/*UX1C100A9481, *UC/*UX1D120A9601 *DC/*DX1B080A9421, *DC/*DX1D120A9601 *DC/*DX1C100A9481, *DX1B080A9H31 *UX/*DX1C100A9H41, *UX/*DX1D120A9H51 *UH1B060, UH1D100 *UH1D120A9601, M951P060BU, M951P100DU, M951P120DU	C342634P37
BAYSWT05AHALTA	*UC/*UX1C080A9601, *UH1B080 *UH1C100, *DH1D110, M951P080BU, M951P100CU, M951P110DD	C342634P21
BAYSWT06AHALTA	*DC/*DX1B060A9361, *DX1B060A9H31	C342634P33
BAYSWT07AHALTA	*UY060R/*DY060R, *UX2B060A/*DX2B060A *UH3B060/*DH3B060, *UHMB060/*DHMB060	C342634P64
BAYSWT08AHALTA	*UX2B080A/*DX2B080A, *UX2C100A/*DX2C100A *UY120R/*DY120R, *UH2B080/*DH2B080 *UH2C100/*DH2C100, *UH2D120/*DH2D120 *UH3D120/*DH3D120, *UHMD120/*DHMD120 M952V080, M952V100, M952V120	C342634P65
BAYSWT09AHALTA	*UY080R/*DY080R, *UY100R/*DY100R *UX2D120A/*DX2D120A, *UH3B080/*DH3B080 *UH3C100/*DH3C100, *UHMB080/*DHMB080 *UHMC100/*DHMC100	C342634P66
BAYSWT10AHALTA	*UH2B060/*DH2B060, M952V060	C342634P68
BAYSWT11AHALTA	*UH1C080	C342634P31
BAYSWT12AHALTA	*DH1B065, M951P065BD	C342634P22

Maybe "A", "C" or "T"

Table 2. Vent Length

Maximum vent length / Longueur maximale du conduit d'échappement Installation instructions must be followed for installation of the venting system. / Consulter la notice pour l'installation du conduit d'échappement.				
Models/Modèles	Maximum vent length (equivalent feet) / Longueur maximale du conduit d'échappement (équivalent en pieds).			
	2" pipe conduit 2 po	2.5" pipe conduit 2.5 po	3" pipe conduit 3 po	4" pipe conduit 4 po
Direct vent (2 pipe system)/Échappement direct (appareil à 2 conduit).				
*UG/*UC/*UX/UH1-040/060	60'	80'	100'	130'
*UG/*UC/*UX-080	50'	80'	100'	130'
*UH1-080	NOTE 1	NOTE 1	70'	130'
*UG/*UC/*UX-100	NOTE 1	40'	100'	130'
*UG/*UC/*UX-120	NOTE 1	15'	60'	130'
*DH1/*DC/*DX-040	60'	80'	100'	130'
*DC/*DX-060	50'	80'	100'	130'
*DH1B065, *DG/*DC/*DX-080	45'	80'	100'	130'
*DH1C085, *DC/*DX-100	NOTE 1	80'	100'	130'
*DH1D110, *DC/*DX-120	NOTE 1	15'	60'	130'
*UH1-100	NOTE 1	NOTE 1	90'	130'
*UH1-120	NOTE 1	NOTE 1	50'	130'
Non-direct vent (1 pipe system)/Échappement indirect (appareil à 1 conduit).				
*UG/*UC/*UH1/*DC/*DH1-040/060	50'	80'	80'	130'
*DH1B065, *UG/*UC/*DG/*DC-080	40'	80'	80'	130'
*UH1-080	NOTE 1	NOTE 1	50'	130'
*UG/*UC/*UX-100	NOTE 1	40'	80'	130'
*DH1D100, *UG/*UC/*DC-120	NOTE 1	25'	70'	130'
*DH1C085, *DC/*DX1-100	NOTE 1	80'	80'	130'
*UH1-100	NOTE 1	NOTE 1	70'	130'
*UH1-120	NOTE 1	NOTE 1	30'	130'
--- For *(U/D)H(3/M) propane applications see notes 6-9 --- --- Pour l'utilisation avec du propane des modèles *(U/D)H(3/M) voir les notes 6-9 ---				
Models/Modèles	2" pipe conduit 2 po	2.5" pipe conduit 2.5 po	3" pipe conduit 3 po	4" pipe conduit 4 po
ALTITUDE/ALTITUDE 0-7000 FT./PI (0-2134 M)				
M952/*UH2/*UHM/*DH2/*DHM-060	200' (NOTE 6)	200' (NOTE 6)	200' (NOTE 7)	200' (NOTE 7)
M952/*UH2/*UHM/*DH2/*DHM-080	50' (NOTE 6)	120' (NOTE 6)	200' (NOTE 7)	200' (NOTE 7)
M952/*UH2/*UHM/*DH2/*DHM-100	NOTE 1	60' (NOTE 6)	200' (NOTE 7)	200' (NOTE 7)
M952/*UH2/*UHM/*DH2/*DHM-120	NOTE 1	NOTE 1	200' (NOTE 7)	200' (NOTE 7)
DHM-120 (PROPANE)	NOTE 1	NOTE 1	100'	100'
ALTITUDE/ALTITUDE 7000 FT./PI - 9500 FT./PI (2134 M - 2896 M)				
M952V/*UH2/*UHM/*DH2/*DHM-060	100' (NOTE 6)	100' (NOTE 6)	100' (NOTE 8)	100' (NOTE 8)
M952V/*UH2/*UHM/*DH2/*DHM-080	25' (NOTE 6)	60' (NOTE 6)	100' (NOTE 8)	100' (NOTE 8)
M952V/*UH2/*UHM/*DH2/*DHM-100	NOTE 1	30' (NOTE 6)	100' (NOTE 8)	100' (NOTE 8)
M952V/*UH2/*UHM/*DH2/*DHM-120	NOTE 1	NOTE 1	100' (NOTE 8)	100' (NOTE 8)
*DHM-120 (PROPANE)	NOTE 1	NOTE 1	50'	50'
ALTITUDE/ALTITUDE 9500 FT./PI - 12000 FT./PI (2896 M - 3658 M)				
M952V/*UH2/*UHM/*DH2/*DHM-060	50' (NOTE 6)	50' (NOTE 6)	50' (NOTE 9)	50' (NOTE 9)
M952V/*UH2/*UHM/*DH2/*DHM-080	NOTE 1	30' (NOTE 6)	50' (NOTE 9)	50' (NOTE 9)
M952V/*UH2/*UHM/*DH2/*DHM-100/120	NOTE 1	NOTE 1	50' (NOTE 9)	50' (NOTE 9)
*DHM-120 (PROPANE)	NOTE 1	NOTE 1	25'	25'

NOTES:

- Not allowed / Non permis.
- Minimum vent length for all models: 3' horizontal and vertical. / La longueur minimale du conduit d'échappement pour tous modèles: 3 pieds horizontalement et verticalement.
- The inlet air of one pipe systems require the installation of a 90° elbow (to prevent dust and debris from falling straight into the furnace) and a 2' horizontal or vertical straight pipe section connected before or after the elbow. / L'entrée d'air des appareils à conduit unique exige l'installation d'un coude à 90° (pour empêcher débris et poussière de tomber directement dans la chaudière) et d'une section horizontale ou verticale de 2 pieds, raccordée avant ou après le coude.
- This application requires a special venting system. Refer to installation instructions for parts list and method of installation. / Cet appareil exige un conduit d'échappement spécial. Consulter la notice pour connaître la liste des pièces et le mode d'installation.
- * Letter may be "A", "C", or "T". / La lettre peut être "A", "C", ou "T".
- Use of vent pipe smaller than 3" in diameter is not permitted for *UHM & *DHM models in propane applications. / L'utilisation d'un conduit d'évacuation d'un diamètre inférieur à 3 po n'est pas autorisée sur les modèles *UHM et *DHM avec le propane.
- Maximum vent length is 150' for *UHM & *DHM models in propane applications at an altitude of 0-7000 feet. / La longueur maximale du conduit d'évacuation est de 150 pieds pour les modèles *UHM & *DHM avec le propane à une altitude comprise entre 0 et 7000 pieds.
- Maximum vent length is 100' for *UHM & *DHM models in propane applications at an altitude of 7000-9500 feet. / La longueur maximale du conduit d'évacuation est de 100 pieds pour les modèles *UHM & *DHM avec le propane à une altitude comprise entre 7000 et 9500 pieds.
- Maximum vent length is 38' for *UHM & *DHM models in propane applications at an altitude of 9500-12000 feet. / La longueur maximale du conduit d'évacuation est de 38 pieds pour les modèles *UHM & *DHM avec le propane à une altitude comprise entre 9500 et 12000 pieds.

Maximum vent length (equivalent feet) / Longueur maximale du conduit d'échappement (équivalent en pieds). Installation instructions must be followed for installation of the venting system. / Consulter la notice pour l'installation du conduit d'échappement.				
Models/Modèles		2" pipe conduit 2 po	2.5" pipe conduit 2.5 po	3" / 4" pipe conduit 3 / 4 po
Direct vent (2 pipe system)/Échappement direct (appareil à 2 conduit).				
M951P040BU24	M951P060BU36	60'	80'	100' / 130'
M951P080BU42		NOTE 1	NOTE 1	70' / 130'
M951P040BD24		60'	80'	100' / 130'
M951P065BD42		45'	80'	100' / 130'
M951P085CD48		NOTE 1	80'	100' / 130'
M951P110DD60		NOTE 1	15'	60' / 130'
M951P100CU48	M951P100DU60	NOTE 1	NOTE 1	90' / 130'
M951P120DU60		NOTE 1	NOTE 1	50' / 130'
Non-direct vent (1 pipe system)/Échappement indirect (appareil à 1 conduit).				
M951P040BU24	M951P060BU36	50'	80'	80' / 130'
M951P040BD24		40'	80'	80' / 130'
M951P065BD42		NOTE 1	NOTE 1	50' / 130'
M951P110DD60		NOTE 1	NOTE 1	50' / 130'
M951P085CD48		NOTE 1	80'	80' / 130'
M951P100CU48	M951P100DU60	NOTE 1	NOTE 1	70' / 130'
M951P120DU60		NOTE 1	NOTE 1	30' / 130'

M95 Furnace NOTES:

- Not allowed / Non permis.
- Minimum vent length for all models: 3' horizontal and vertical. / La longueur minimale du conduit d'échappement pour tous modèles: 3 pieds horizontalement et verticalement.
- The inlet air of one pipe systems require the installation of a 90° elbow (to prevent dust and debris from falling straight into the furnace) and a 2' horizontal or vertical straight pipe section connected before or after the elbow. / L'entrée d'air des appareils à conduit unique exige l'installation d'un coude à 90° (pour empêcher débris et poussière de tomber directement dans la chaudière) et d'une section horizontale ou verticale de 2 pieds, raccordée avant ou après le coude.
- This application requires a special venting system. Refer to installation instructions for parts list and method of installation. / Cet appareil exige un conduit d'échappement spécial. Consulter la notice pour connaître la liste des pièces et le mode d'installation.

NOTES:

- Line contact only permissible between lines formed by intersections of the front and rear surfaces with the top surface of the furnace jacket and building joists, studs and framing. / Les seuls points de contact admissibles se trouvent entre les lignes formées par les intersections des surfaces avant et arrière avec la surface supérieure de l'enveloppe du générateur d'air chaud, et les solives, les poutres ou la charpente du bâtiment.
- For installation on combustible flooring only when installed on special base, part # BAYBASE205. To be used only for vertical downflow application without a coil. / Installation sur plancher inflammable avec base spéciale. Pièce # BAYBASE205 seulement. À utiliser seulement pour une application verticale à circulation descendante sans serpent.

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