## VALV-IN-37 18-HE20D6-3

# **Installer's Guide**

## THERMOSTATIC EXPANSION VALVE KITS

TAYTXVA0H3C	TAYTXVA0G5C	TAYTXVH0D3C
TAYTXVA0B5C	TAYTXVA0H5C	TAYTXVH0E3C
TAYTXVA0C5C	TAYTXVH0B3C	TAYTXVH0G3C
TAYTXVA0E5C	TAYTXVH0C3C	TAYTXVH0H3C
	TAYTXVA0H3C TAYTXVA0B5C TAYTXVA0C5C TAYTXVA0E5C	TAYTXVA0H3CTAYTXVA0G5CTAYTXVA0B5CTAYTXVA0H5CTAYTXVA0C5CTAYTXVH0B3CTAYTXVA0E5CTAYTXVH0C3C

#### Models for R-410A Refrigerant: 4AYTXVH3A1830A; 4AYTXVH3A3654A; 4AYTXVH3A6060A

#### 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.

#### **General Information**

These **Thermostat Expansion Valve Kits** may be used on any indoor unit that is equipped with an Accutron<sup>™</sup> Flow Control Check Valve for refrigerant expansion control on split system heat pump and air conditioning systems.

These **Thermostat Expansion Valve Kits** can be field installed to fit a variety of sizes and combinations of air handlers or coils and outdoor units to optimize performance.

The TXV Kit will require clearance at the front of the coil or air handler. The total clearance needed for the **air conditioner** kits (TAYTXV<u>A</u>\*\*\*\*) is **six** (6) inches. The total clearance required for the **heat pump** kit (TAYTXV<u>H</u>\*\*\*\* or 4AYTXVH3A\*\*\*\*) is **seven** (7) inches.



The eighth or tenth digit as a "3" indicates a non-bleed TXV and a "5" indicates a bleed TXV. If a **non-bleed TXV Kit** is installed on a system with an outdoor unit of 2-1/2 tons or more, the fan delay function in the air handler should be disabled in order to obtain maximum efficiency. This is not required on Variable Speed indoor products.

#### Inspection

Check carefully for any shipping damage. Any such damage must be reported to and claims made against the transportation company immediately. Any missing parts should be reported to your supplier at once and replaced with authorized parts only.



# **Installer's Guide**

AIR CONDITIONERS with R-22 Refrigerant					
TXV KIT NO.	OUTDOOR UNITS	DOOR UNITSTXV TYPELIQUID LINE DIA. I.D.GAS LINE DIA. I.D.			
TAYTXVA0B5C	1, 1½ TON	BLEED	1/4"	5/8"	
TAYTXVA0C5C	2, 2½ TON	BLEED	5/16"	3/4"	
TAYTXVA0E5C	3, 3½ TON	BLEED	3/8"	7/8"	
TAYTXVA0G5C	4 TON	BLEED	3/8"	1-1/8"	
TAYTXVA0H5C	5, 6 TON	BLEED	3/8"	1-1/8"	
TAYTXVA0B3C	1, 1½ TON	NONBLEED	1/4"	5/8"	
TAYTXVA0C3C	2, 2½ TON	NONBLEED	5/16"	3/4"	
TAYTXVA0E3C	3, 3½ TON	NONBLEED	3/8"	7/8"	
TAYTXVA0G3C	4 TON	NONBLEED	3/8"	1-1/8"	
TAYTXVA0H3C	5, 6 TON	NONBLEED	3/8"	1-1/8"	

### Application Guide

HEAT PUMPS / AIR CONDITIONERS with R-22 Refrigerant					
TXV KIT NO.	OUTDOOR UNITS	ΤΧΥ ΤΥΡΕ	LIQUID LINE DIA. I.D.	GAS LINE DIA. I.D.	
TAYTXVH0B3C	1, 1½ TON	NONBLEED	1/4"	5/8"	
TAYTXVH0C3C	2, 2½ TON	NONBLEED	5/16"	3/4"	
TAYTXVH0E3C	3, 3½ TON	NONBLEED	3/8"	7/8"	
TAYTXVH0G3C	See Note 1	NONBLEED	3/8"	1-1/8"	
TAYTXVH0H3C	5, 6 TON	NONBLEED	3/8"	1-1/8"	
Notes: 1. 4 ton single stage	e and 4, 5 ton two stage	9			

HEAT PUMPS / AIR CONDITIONERS with R-410A Refrigerant					
TXV KIT NO.	OUTDOOR UNITS TYPE TXV		LIQUID LINE DIA. I.D.	GAS LINE DIA. I.D.	
4AYTXVH3A1830A	1 - 2½ TON	NONBLEED	3/8"	3/4"	
4AYTXVH3A3654A	3 - 4 TON	NONBLEED	3/8"	7/8"	
4AYTXVH3A6060A	5 TON	NONBLEED	3/8"	7/8"	
Nataa					

#### Notes:

1. 1-1/2 ton requires 1/4" liquid line; reducer fitting provided

2. 1-1/2 ton requires 1/2" gas line, 2 ton requires 5/8"; reducer fitting provided

3. 3 and 3-1/2 ton require 3/4" gas line; reducer fitting provided

# **Installer's Guide**

#### Application for Reducer Couplings Included with R-410A Refrigerant TXV Kits

Kit \*1830 includes 4 reducing fittings —

5/8" O.D. to 1/2" I.D. Reducer Coupling 3/8" O.D. to 1/4" I.D. Reducer Coupling 3/4" O.D. to 5/8" I.D. Reducer Coupling 3/4" I.D. to 5/8" I.D. Reducer Coupling Kits \*3654 and \*6060 each include 2 reducing fittings —

7/8" O.D. to 3/4" I.D. Reducer Coupling 1-1/8" O.D. to 7/8" I.D. Reducer Coupling

#### Gas Line Connection

Converting R-22 Refrigerant Indoor Coil or Air Handler		REDUCER COUPLING SIZE AND LOCATION AT TXV TO USE						
for R-410A	Refrigera	nt Outdoor U	Init					
TXV Kit Model Number and Line Set Conn. Size	Model Size 000's (btu's)	R-410A Standard Gas Line Dia.	R-22 Coil Gas Line Connection Dia.	1/2" I.D. X 5/8" O.D.	5/8" I.D. X 3/4" O.D.	5/8" I.D. X 3/4" I.D.	3/4" I.D. X 7/8" O.D.	7/8" I.D. X 1-1/8" O.D.
4AYTXVH3A1830A	18	1/2" O.D.	5/8" I.D.①	@ LINE SET	@ LINE SET	@ COIL (1)		
3/4" Gas Line 3/8" Liquid Line	24	5/8" O.D.	3/4" I.D.	-         @ LINE SET         -         NOT IN           -         -         -         -         -		NOT IN	THIS KIT	
	30	3/4" O.D.	3/4" I.D.					
	36	3/4" O.D.	7/8" I.D.				@ COIL	-
4AYTXVH3A <u>3654</u> A 7/8" Gas Line 3/8" Liquid Line	42	3/4" O.D.	7/8" I.D.			@ COIL	-	
	48	7/8" O.D.	1-1/8" I.D.				-	@ COIL
	54	7/8" O.D.	1-1/8" I.D.	INC	NOT IN THIS KIT –			@ COIL
4AYTXVH3A <u>6060</u> A 7/8" Gas Line 3/8" Liquid Line	60	7/8" O.D.	1-1/8" I.D.	-		_	@ COIL	
Notes: ① - Cutoff 5/8" diameter swage from coil gas line connection and slide reducer over stub to braze								

#### Liquid Line Connection

Converting R-22 Refrigerant Indoor Coil or Air Handler for R-410A Refrigerant Outdoor UnitTXV Kit Model Number and Line Set Connection SizeModel Size in 000's (BTU's)R-410A Standard Liquid Line Dia.R-22 Coil Liquid Line Connection Dia.				REDUCER COUPLING SIZE AND LOCATION AT TXV TO USE
				1/4" I.D. X 3/8" O.D.
	18	1/4" O.D.	3/8" I.D.	@ LINE SET
	24	5/16" O.D. 🛈	3/8" I.D.	-
4AYTXVH3A <u>1830</u> A 3/4" Gas Line 3/8" Liquid Line 4AYTXVH3A <u>3654</u> A 7/8" Gas Line 3/8" Liquid Line	30	5/16" O.D. 🛈	3/8" I.D.	-
	36	3/8" O.D.	3/8" I.D.	
	42	3/8" O.D.	3/8" I.D.	
	48	3/8" O.D.	3/8" I.D.	
	54	3/8" O.D.	3/8" I.D.	NOT IN THIS KIT
4AYTXVH3A <u>6060</u> A 7/8" Gas Line 3/8" Liquid Line	60	3/8" O.D.	3/8" I.D.	
<u>Notes:</u> ① - Cutoff 3/8" diameter swage from 4AYTXVH3A1830A liquid line assembly for 5/16"line size match				

# **Installer's Guide**

#### Installation

#### Brazed Evaporator (Indoor) Section

#### **IMPORTANT:**

Do not unseal refrigerant tubing until you are ready to install a Thermostatic Expansion Valve Kit.

There is only a holding charge of dry air in the indoor unit coil, therefore no loss of operating refrigerant charge occurs when seals are removed.

1. Remove both seals from the stub tubes.

### CAUTION

#### Painted areas of the unit must be shielded during brazing.

- 2. Disassemble the Accutron<sup>™</sup> device by turning the adapter hex nut counterclockwise.
- 3. If the Flow Control Check Valve has not dropped out of the body when disassembled, remove by using a pin or paper clip. *Discard the F.C.C.V.*
- 4. Connect Thermostatic Expansion Valve (TXV) Kit to Flow Control Check Valve Body by hand to insure proper mating of the threads, and tighten with a wrench until bodies "bottom" or a definite resistance is felt. A firm metal to metal contact will be felt.

#### **IMPORTANT:**

Be sure the Thermostatic Expansion Valve Kit is positioned not to interfere with the access panel(s) or vent pipe and drain pipe before final tightening of the hex nut.

5. Mark a line lengthwise from the TXV union nut to the bulkhead. Then tighten an additional 1/6 turn (or hex flat). The misalignment of the pen line will show the amount the assembly has been tightened. This final 1/6 turn is necessary to ensure a leakproof joint.

- 6. Insert the gas (suction) line tube from the TXV kit into the stub socket of the indoor gas line connection. See Figure 3.
- 7. Installation of the refrigerant lines is covered in the installation instruction with the outdoor unit. Evacuating, testing, and brazing procedures are included. Read those instructions before starting installation of the refrigerant lines.
- 8. After all the brazing has been completed, remove the cap from the flare coupling on the TXV kit gas line and discard the cap. Connect the TXV external equalizer tube flare nut to the flare coupling on the TXV kit gas line by hand to ensure proper mating of the threads, and tighten securely with a wrench to ensure a leakproof joint.
- 9. Clamp the removed TXV bulb to the gas line as illustrated in Figure 3. Use the clamp provided to secure the bulb to the gas line. The entire length of the bulb must be in firm contact with the gas line The remote bulb tubing must not be allowed to touch a surface colder than the remote bulb location.
- 10. Included with the TXV kit you will find insulation material to cover the TXV kit tubing where refrigerant gas and/or liquid flows. The entire TXV kit must be insulated to prevent sweating of the tubing.

#### **Disabling Fan Delay**

To disable the fan delay function check the indoor air handler or furnace Installer's Guide or Service Facts. The information will be in the section for airflow adjustment.



Literature Order Number	VALV-IN-37	
File Number	SU-UN-ACC-VALV-IN-37 5/02	
Supersedes	New	
Stocking Location	PI Louisville & Webb/Mason-Houston	P.I.

American Standard Inc. 6200 Troup Highway Tyler, TX 75707

Since the manufacturer has a policy of continuous product and product data improvement, it reserves the right to change design and specifications without notice.

For more information contact your local dealer (distributor)