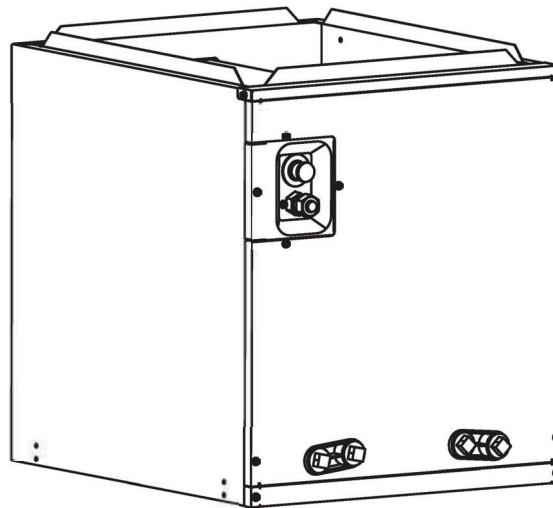


# INSTALLATION INSTRUCTIONS

## Upflow/Downflow Cased Coils Cooling and Heat Pump Compatible

Factory Installed R-410A Metering Device



RECOGNIZE THIS SYMBOL AS AN INDICATION OF IMPORTANT SAFETY INFORMATION

### WARNING

These instructions are intended as an aid to qualified licensed service personnel for proper installation, adjustment and operation of this unit. Read these instructions thoroughly before attempting installation or operation. Failure to follow these instructions may result in improper installation, adjustment, service or maintenance and possibly resulting in fire, electrical shock, property damage, personal injury or death.



**DO NOT DESTROY THIS MANUAL**

Please read carefully and keep in a safe place for future reference by a serviceman.

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## 1.0 SAFETY

When you see the symbols below on labels or in manual, be alert to the potential or immediate hazards of personal injury, property and/or product damage. It is the owner's or installer's responsibility to comply with all safety instructions and information accompanying these symbols.



### WARNING

This is a safety alert symbol indicating a potential hazardous situation, which could result in personal injury, property and/or product damage or death.



### CAUTION

This is a safety alert symbol indicating a potential hazardous situation, which could result in moderate personal injury, and/or property and product damage.



### WARNING

Disconnect all power to the unit before starting any service and maintenance. Failure to do so could cause severe electrical shock resulting in personal injury or death.



### WARNING

Installation or servicing of this unit can be hazardous due to parts, components and system pressure. Qualified and proper trained service personnel should perform installation and repair. Failure to do so could cause severe electrical shock resulting in personal injury or death.

## 2.0 GENERAL

These coils are approved for upflow or downflow, vertical installation only. For furnace applications, the coil must be installed downstream (in the air outlet) of the furnace.

## 2.1 CODES & REGULATIONS

This product is designed and manufactured to comply with national codes. Installation in accordance with such codes and/or prevailing local codes/regulations is the responsibility of the installer. The manufacturer assumes no responsibility for equipment installed in violation of any codes or regulations.

The United States Environmental Protection Agency(EPA) has issued various regulations regarding the introduction and disposal of refrigerants. Failure to follow these regulations may harm the environment and can lead to the imposition of substantial fines. Should you have any questions please contact the local office of the EPA.

## 2.2 INSPECTION UPON UNIT ARRIVAL

As soon as unit is received, it should be inspected and noted for possible shipping damage during transportation. It is carrier's responsibility to cover the cost of shipping damage. Manufacturer or distributor will not accept a claim from contractors for any transportation damage.

## 2.3 CLEARANCES

Following clearances should be provided during installation

- a.Maintenance and service access, including coil cleaning and coil assembly removal
- b.Refrigerant piping and connections
- c.Condensate drain line

For ensure the proper installation, Select a solid and level site.

Ensure enough space required for installation and maintenance.

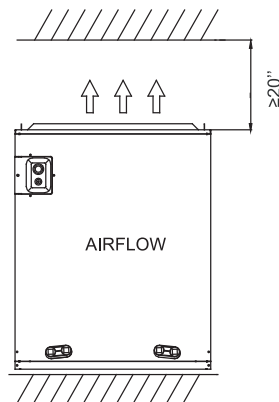


Fig. 1 Front view of the indoor unit clearance(including air duct).

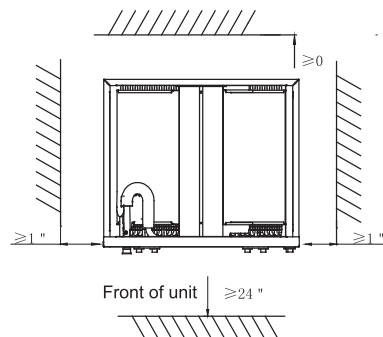


Fig. 2 Top view of the indoor unit clearance(including air duct).

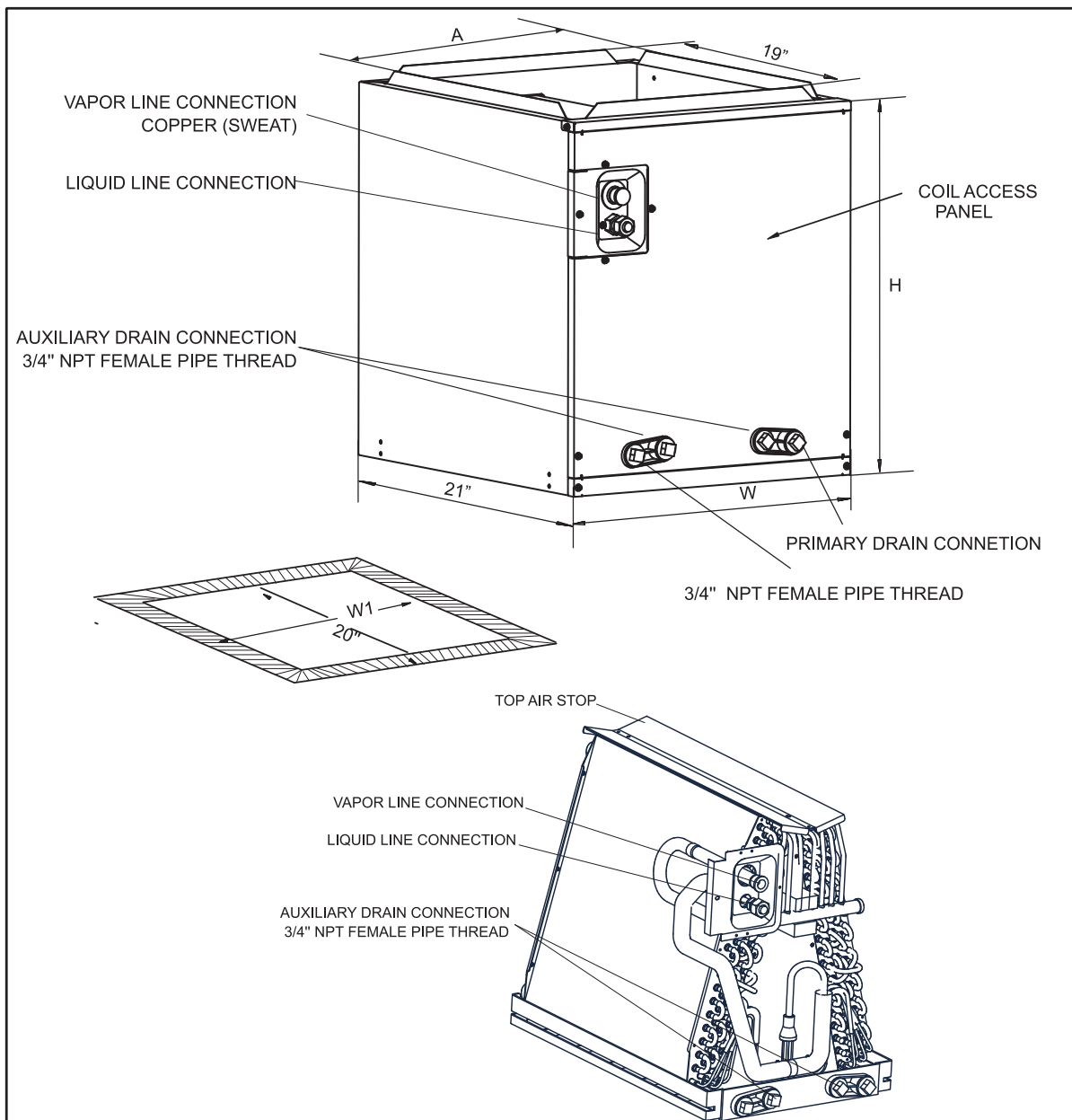


Fig.3 CASED DIMENSIONS AND COMPONENT LOCATION

DIMENSIONAL DATA

MODEL SIZE	Dimensions inch [mm]					WEIGHT/SHIPPING WEIGHT (LBS.[kg])
	UNIT HEIGHT "H" IN. [mm]	UNIT WIDTH "W" IN. [mm]	SUPPLY DUCT "A"	"W1" IN. [mm]	LIQUID LINE / VAPOR LINE	
4GXCA001AC6HUA	20"[508]	14-1/2"[ 368]	13"[330]	13-1/2"[ 343]	3/8" / 3/4"	40/47[ 18.2/21.5]
4GXCB002AC6HUA	20"[508]	17-1/2"[ 445]	16"[407]	16-1/2"[ 419]	3/8" / 3/4"	43/50[ 19.4/22.9]
4GXCA003AC6HUA	20"[508]	14-1/2"[ 368]	13"[330]	13-1/2"[ 343]	3/8" / 3/4"	40/47[ 18.2/21.5]
4GXCB004AC6HUA	20"[508]	17-1/2"[ 445]	16"[407]	16-1/2"[ 419]	3/8" / 3/4"	43/50[ 19.4/22.9]
4GXCC005AC6HUA	20"[508]	21"[ 553]	19-1/2"[495]	20"[ 508]	3/8" / 3/4"	46/55[ 21.1/25.1]
4GXCB006AC6HUA	26"[660]	17-1/2"[ 445]	16"[407]	16-1/2"[ 419]	3/8" / 7/8"	53/61[ 24.1/27.6]
4GXCC007AC6HUA	26"[660]	21"[ 533]	19-1/2"[495]	20"[ 508]	3/8" / 7/8"	57/65[ 25.7/29.4]
4GXCD008AC6HUA	26"[660]	24-1/2"[ 622]	23"[584]	23-1/2"[ 597]	3/8" / 7/8"	59/68[ 26.8/31.1]
4GXCC009AC6HUA	30"[762]	21"[ 533]	19-1/2"[495]	20"[ 508]	3/8" / 7/8"	76/85[ 34.6/38.7]
4GXCD010AC6HUA	30"[762]	24-1/2"[ 622]	23"[584]	23-1/2"[ 597]	3/8" / 7/8"	80/89[ 36.5/40.5]
4GXCB016AC6HUA	30"[660]	17-1/2"[ 622]	16"[407]	16-1/2"[ 419]	3/8" / 7/8"	62/71[ 28.3/32.3]
4GXCC017AC6HUA	30"[762]	21"[ 533]	19-1/2"[495]	20"[ 508]	3/8" / 7/8"	66/76[ 30.0/34.6]
4GXCD018AC6HUA	30"[762]	24-1/2"[ 622]	23"[584]	23-1/2"[ 597]	3/8" / 7/8"	69/80[ 31.7/36.5]

## 3.0 INSTALLATION INSTRUCTIONS

### 3.1 PARTS

Contact your distributor for authorized replacement parts.

### 3.2 PRE-INSTALLATION INSTRUCTIONS

Carefully read all instructions for installation prior to installing product. Make sure each step or procedure is understood and any special considerations are taken into account before starting installation. Assemble all tools, hardware and supplies needed to complete the installation. Some items may need to be purchased locally. Make sure everything needed to install the product is on hand before starting.

### 3.3 INSTALLATION AND TRAP CONNECTION

1. See Fig.4 for coil installation and drain connection for vertical applications.
2. Installation steps for cased coil:
  - A. Shut off or disconnect gas furnace's power and remove gas pipe if necessary;
  - B. Disconnect and remove a sufficient portion of the supply ductwork to provide clearance for the cased coil ;
  - C. Ensure that the coil is leveled well and seal the gap between coil and furnace. See Figure 4. In case that coil and furnace sizes are not matched, use proper size of sheet metal or other material to fill the gap and seal the gap to prevent air leak ;
  - D. Reconnect the ductwork to the coil case, and seal any leakage ;
  - E. Reconnect power line on gas furnace, turn on the furnace to check any sign of leakage .

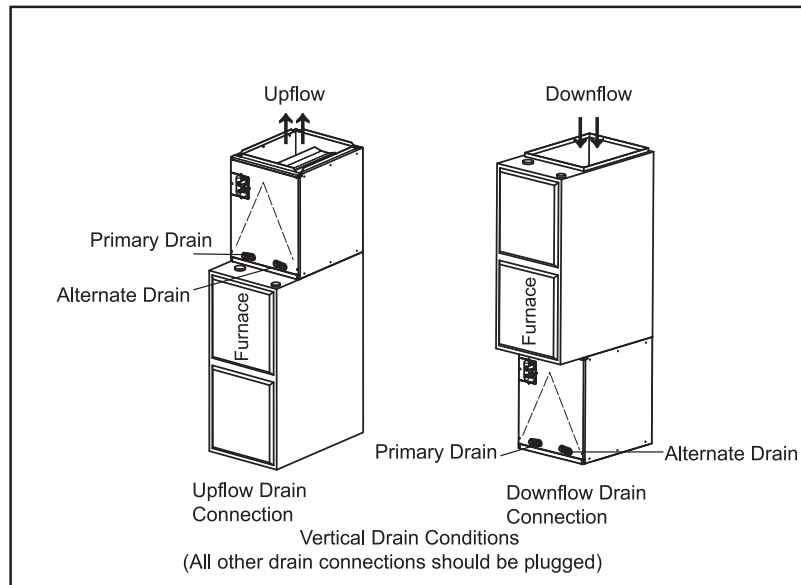


Fig.4 INSTALLATION OF CASED COIL

## 4.0 DRAIN APPLICATION

### 4.1 CONDENSATE DRAIN PIPING

Consult local codes for special requirements.

To provide extra protection from water damage, it is always recommended to install an additional drain pan, provided by installer under the entire unit with a separate drain line. Manufacturer will not be responsible for any damages due to the failure to follow these recommendations.

### 4.2 PLASTIC DRAIN PAN INSTALLATION



#### WARNING

Do not use the coil pan shipped with the unit on OIL furnaces or any application where the temperature of the drain pan may exceed 275°F. A field fabricated metal drain pan can also be used for these type of applications. Failure to follow this warning may result in property damage and/or personal injury.

The coil drain pan has a primary and an optional secondary drain with 3/4" NPT female connections; use either PVC or copper pipe and hand tighten to a torque of approximately 37 in-lbs. to prevent damage to the drain pan connection. An insertion depth between .355 to .485 inches (3-5 turns) should be expected at this torque setting.

Use male 3/4" NPT threaded fitting for outside connection and make sure the drain holes are not blocked.

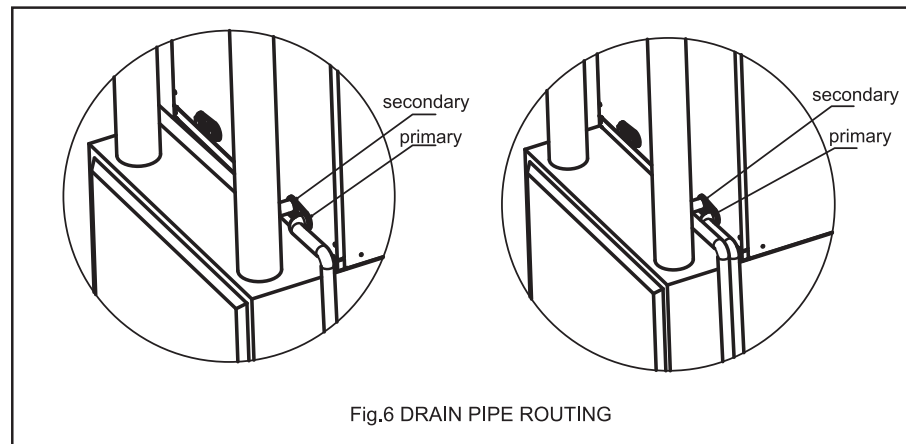
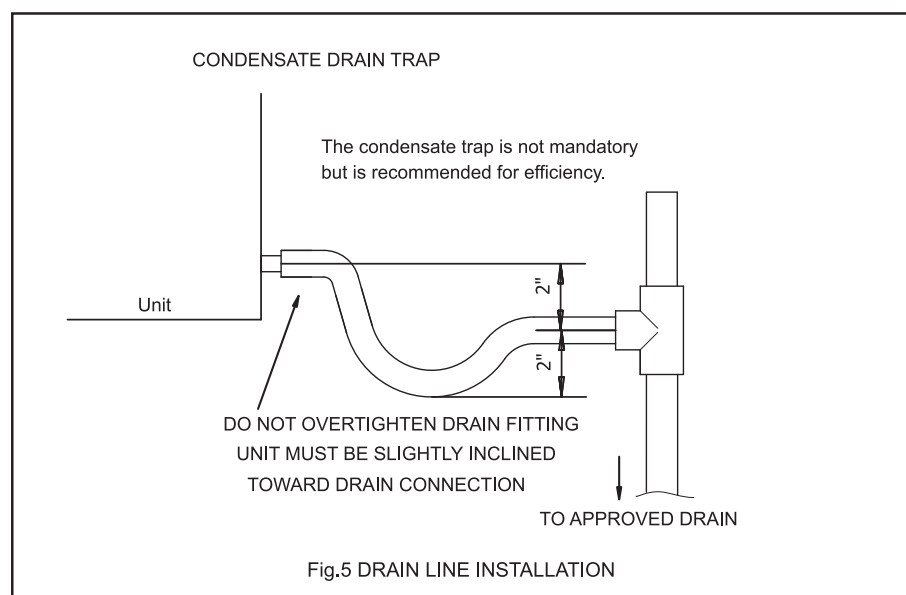
Insulation may be needed for drain line to prevent sweating.

Drain pan has two drain connections on each side to provide flexibility of connection and drainage. Make sure pan has proper pitch and plugged if second connection is not used.

If the secondary drain line is required, run the line separately from the primary drain and terminate it where it can be easily seen.

**NOTE:** Water coming from this line means the coil primary drain is plugged and needs clearing.

Install a trap in the drain line below the bottom of the drain pan. If using a copper drain line, solder a short piece of pipe to the connector before installing a drain fitting. DO NOT over torque the 3/4" copper connector to the plastic drain connection. Use a wet rag or heatsink material on the short piece to protect plastic drain pan, complete the drain line installation (Fig.5 ). Use (Fig.6) as a template for typical drain pipe routing. This figure shows how to avoid interference with vent piping.



## 5.0 REFRIGERANT CONNECTIONS



### CAUTION

Gently remove the sealing plug of vapor line, use one wrench to fix the valve base, loose the nut with another wrench, take out the flange pad and and sealing ring. The nitrogen pressure is about 10 PSIG.

To prevent refrigerant leak, use proper tools to ensure clean, burr-free cut.



### CAUTION

TXV bulb **MUST** be protected (wrapped with wet rag) or removed, while brazing the tubing. Overheating of the sensing bulb will affect the functional characteristics and performance of the comfort coil.

Use brazing shield when brazing close to the cabinet surface and wet rag to protect rubber grommet.

Brazing alloy should be at least 5% silver content.

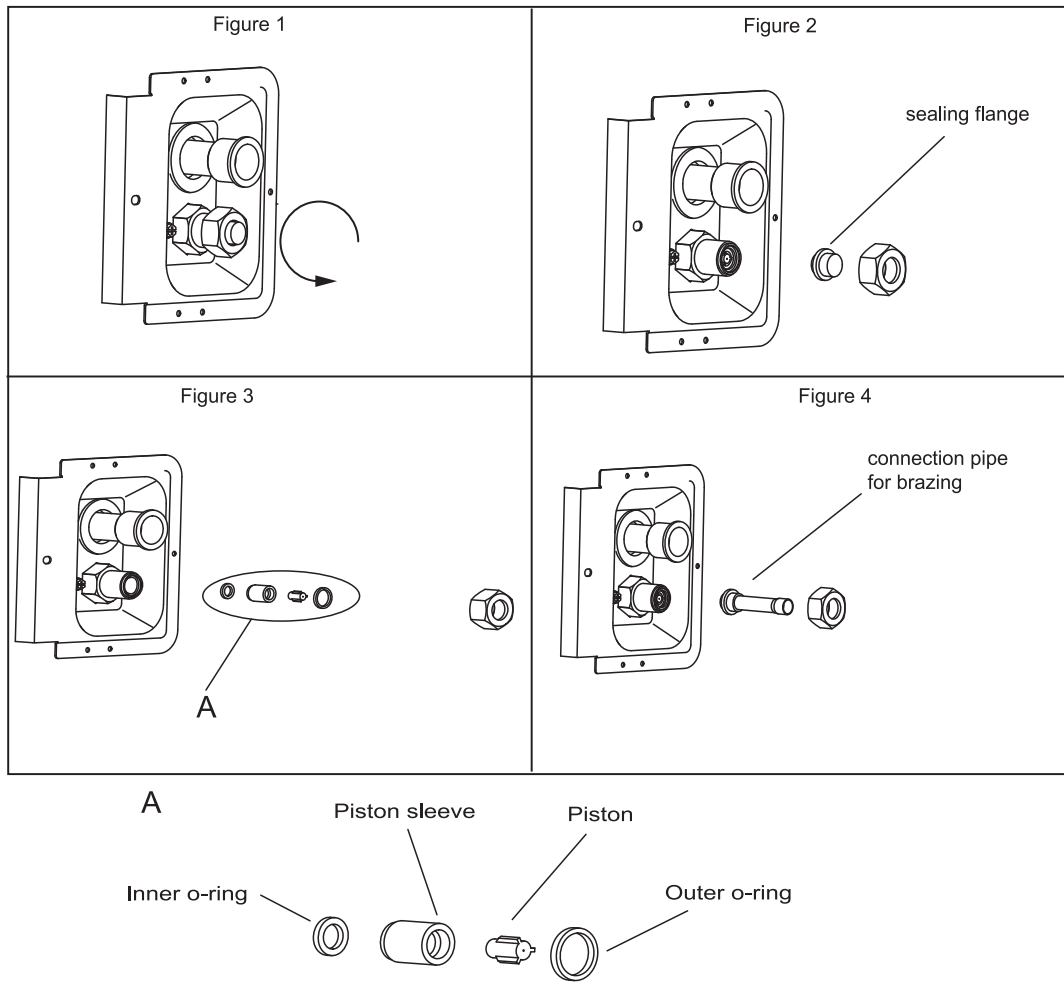


## 6.0 PISTON/TXV INSTALLATION

**Note: A piston does come pre-installed. The piston must be removed before installing a TXV.**

### Piston installation

1. Using a wrench to loosen the nut. Remove the nut and sealing flange.
2. Check the piston sizes for each outdoor/coil combination in Table 1 and choose the correct piston size for your combination.
3. If a different size piston is needed for your system combination, remove the pre-installed piston.  
NOTE: Piston sleeve may come out with the piston. If so, check that inner O-ring is still in place. If not, use the small O-ring provided in the doc pack. Re-install piston sleeve with correct orientation.
4. Choose correct size piston from the doc pack and insert it with correct orientation.
5. Replace outer O-ring with the O-ring provided in the doc pack.
6. Attach the connection pipe with nut and tighten to 1/6th turn past hand-tighten.  
NOTE: MUST wrap the nut with a wet rag before brazing.



### Optional TXV kit installation:

Reference TXV kit literature for installation instructions.

This coil comes with a factory installed piston metering device. See Table 1 for factory installed piston size. Some system combinations will require a different sized piston to be field installed.

- Use the piston size recommended by the outdoor unit if available
- Reference Table 2 if the outdoor unit does not list a piston size
- The ship-with literature bag will contain additional R-410A pistons for most applications
- Contact your local parts center to order the appropriate piston if it is not included with the literature.

A TXV may be required to achieve minimum efficiency ratings or for long refrigerant line set applications. Reference AHRI for system combination ratings. Use Table 4 for TXV kit part numbers.

Reference Table 5 to charge the system by superheat when using a piston. Reference the outdoor unit installation guide to change the system by subcooling when using a TXV.

Table 1. Factory installed piston size for each coil model. Additional piston sizes are provided in the ship-with literature bag as necessary.

4GXC	Piston/orifice sizes included with each 4GXC model							
Model	52	58	63	65	70	75	83	90
1	X	X*	X	X	X			
2	X	X*	X	X	X			
3	X	X	X	X	X*			
4	X	X	X	X	X*			
5	X	X	X	X	X*			
6				X	X	X	X*	
7					X	X	X*	
8					X	X	X*	
9						X	X	X*
10						X	X	X*
16		X	X	X	X	X	X*	
17			X	X	X	X	X*	
18					X	X	X*	

\* means that this piston is pre-installed


	<b>WARNING</b>
Failure to install the proper piston can lead to poor system performance and possible compressor damage.	

Table 2. Use chart below when matching coil with outdoor unit. Additional piston sizes are provided in the ship-with literature bag as necessary.

Outdoor Unit Capacity (Tons)	Piston Size* (R410a)	Piston Kit	Piston Size* (R22)	Piston Kit
1.5	52	MAYORIACHP0052B	52	MAYORIACHP0052B
2	58	MAYORIACHP0058B	58	MAYORIACHP0058B
2.5**	063 / 065	MAYORIACHP0063B / 065A	65	MAYORIACHP0065A
3	70	MAYORIACHP0070B	72	MAYORIACHP0072B
3.5	75	MAYORIACHP0075B	78	MAYORIACHP0078B
4	83	MAYORIACHP0083B	88	MAYORIACHP0088B
5	90	MAYORIACHP0090B	96	MAYORIACHP0096B

\*Piston size needed for system combination may not be pre-installed. See Table 1 for pre-installed size.

\*\*Necessary piston size varies for this tonnage. See Table 3.

Table 3. R410a piston sizes for 2.5T outdoor capacity system.

Outdoor Unit Model*		Coil Model	Piston Size (R410a)
4TTR3030G1	4A7A3030G1	4GXCA001AC6HUA 0.058 factory installed	0.063
4TTR3030H1	4A7A3030H1		0.063
4TTR4030L1	4A7A4030L1		0.063
4TTR4031L1	4A7A4031L1		0.063
4TTR6030J1	4A7A6030J1		0.063
4TTA3030A3	4TTA3030A4		0.065
M4AC3030B1	M4AC4030B1		0.063
4TTR3030G1	4A7A3030G1	4GXCB002AC6HUA 0.058 factory installed	0.063
4TTR3030H1	4A7A3030H1		0.063
4TTR4030L1	4A7A4030L1		0.063
4TTR4031L1	4A7A4031L1		0.063
4TTR6030J1	4A7A6030J1		0.063
4TTA3030A3	4TTA3030A4		0.065
M4AC3030B1	M4AC4030B1		0.063
4TTR3030G1	4A7A3030G1	4GXCA003AC6HUA 0.070 factory installed	0.065
4TTR3030H1	4A7A3030H1		0.063
4TTA3030A3	4TTA3030A4		0.065
4TTR3030G1	4A7A3030G1	4GXCB004AC6HUA 0.070 factory installed	0.065
4TTR3030H1	4A7A3030H1		0.063
4TTR6030J1	4A7A6030J1		0.065
4TTA3030A3	4TTA3030A4		0.065
4TTR3030G1	4A7A3030G1	4GXCC005AC6HUA 0.070 factory installed	0.065
4TTR3030H1	4A7A3030H1		0.063
4TTA3030A3	4TTA3030A4		0.065
M4AC4030B1			0.065
4TTR6030J1	4A7A6030J1	4GXCB006AC6HUA 0.083 factory installed	0.065
4TWR4030D1	4A6H4030D1		0.065
4TWR5030G1	4A6H5030G1		0.065

Outdoor Unit Model*		CoilModel	PistonSize (R410a)
4TWR4030G1	4A6H4030G1	4GXCB016AC6HUA 0.083 factory installed	0.065
4TWR4030G1	4A6H4030G1	4GXCC017AC6HUA 0.083 factory installed	0.065
4TWR4030G1	4A6H4030G1	4GXCD018AC6HUA 0.083 factory installed	0.065

\*NOTE: Since the manufacturer has a policy of continuous product and product data improvement, if the system combination you are looking for is not listed Table 3, check for the latest version of this document at [www.ComfortSite.com](http://www.ComfortSite.com) or [www.AmeristarHVAC.com](http://www.AmeristarHVAC.com).

Table 4. Optional TXV kit part numbers. Some combinations may require a TXV. See AHRI for system combination ratings.

Outdoor Unit Capacity (Tons)	R410a TXV Kit	R22 TXV Kit
1.5-3.0	4AYTXVH3G2436A	2AYTXVH3G2436A
3.5-4.0	4AYTXVH3G4248A	2AYTXVH3G4248A
5	4AYTXVH3G6000A	2AYTXVH3G6000A


	<b>CAUTION</b>
An improperly charged system will likely cause loss in system performance and may damage the compressor.	

Table 5. Piston Superheat Charging Chart

Outdoor temp(°F)	Indoor Temperature (°F) Dry Bulb/wet Bulb					
	95/79	90/75	85/71	80/67	75/63	70/58
	Superheat					
115	23	16	7	5	5	5
110	24	17	9	5	5	5
105	26	19	11	5	5	5
100	27	21	13	7	5	5
95	29	23	16	9	5	5
90	30	25	18	12	5	5
85	35	26	20	14	8	5
80	34	28	22	17	11	5
75	35	30	24	19	13	6
70	37	32	26	21	16	10
65	38	34	29	24	19	13
60	40	36	31	27	22	17
55	41	37	33	29	25	21

Note: Chart is based on 400 CFM/Ton indoor airflow and 50% relative humidity. If indoor relative humidity is above 70% or below 20%, use indoor wet bulb temperature only. Airflow range is 375 to 425 CFM/Ton.

**AIRFLOW PERFORMANCE [CFM VS PRESSURE DROP]:**

PRESSURE DROP CHARACTERISTICS FOR COOLING AND HEAT PUMP COILS AIRFLOR(SCFM)VS. PRESSURE DROP ACROSS WET COIL								
PRESSURE DROP (INCHES OF WATER COLUMN)								
MODEL	0.05	0.1	0.15	0.2	0.25	0.3	0.35	0.4*
4GXCA001AC6HUA	307	485	618	729	823	911	991	1063
4GXCB002AC6HUA	327	527	682	810	925	1024	1122	1217
4GXCA003AC6HUA	307	485	618	729	823	911	991	1063
4GXCB004AC6HUA	327	527	682	810	925	1024	1122	1217
4GXCC005AC6HUA	360	585	748	893	1019	1132	1238	1348
4GXCB006AC6HUA	401	600	773	916	1045	1160	1256	1357
4GXCC007AC6HUA	457	663	856	1019	1156	1277	1394	1502
4GXCD008AC6HUA	496	718	924	1102	1259	1398	1530	1651
4GXCC009AC6HUA	439	699	906	1071	1224	1362	1487	1589
4GXCD010AC6HUA	466	764	978	1157	1313	1466	1590	1695
4GXCB016AC6HUA	456	638	810	953	1077	1191	1284	1390
4GXCC017AC6HUA	505	726	932	1098	1244	1375	1494	1604
4GXCD018AC6HUA	533	857	1105	1319	1509	1675	1824	1956

\*Data based on wet coil with entering air at 80 degF DB / 67 degF WB without air filter.

**MAXIMUM AIRFLOW SETTING,CFM**

Note:Water blow-off could occur in certain installation positions if the airflow setting exceeds the maximum values listed.

Maximum airflow setting,CFM					
Coil	Upflow	Downflow	Coil	Upflow	Downflow
4GXCA001AC6HUA	1125	1050	4GXCD008AC6HUA	1575	1450
4GXCB002AC6HUA	1125	1050	4GXCC009AC6HUA	1850	1750
4GXCA003AC6HUA	1200	1050	4GXCD010AC6HUA	2000	1850
4GXCB004AC6HUA	1250	1050	4GXCB016AC6HUA	1800	1700
4GXCC005AC6HUA	1250	1050	4GXCC017AC6HUA	1800	1700
4GXCB006AC6HUA	1575	1400	4GXCD018AC6HUA	1800	1700
4GXCC007AC6HUA	1575	1400			

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For more information contact  
your local dealer (distributor)



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

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