2010-0486

DEC 7 2010

VILLAGE OF ORLAND PARK
SMART ENERGY FUND AGREEMENT

THIS AGREEMENT, entered into this 19th day of November, 2010, between the Village of Orland Park, Illinois (hereinafter referred to as "Village") and the following designated Owner/Lessee, to witness:

Owner's Name:	Thomas G. Corn
Lessee's Name:	N/A
Name of Business:	Zimmerman-Sandeman Funeral Home
Tax ID#/Social Security #:	36-3199562
Address of Property to be Improved:	9900 W. 143rd Street
PIN Number:	27-04-415-021 through -028

WITNESSETH:

WHEREAS, the Village of Orland Park has established a Smart Energy Fund for application within the Village of Orland Park (the "Village") and funded it through the American Recovery and Reinvestment Act of 2009 via the United States Department of Energy's Energy Efficiency and Conservation Block Grant (EECBG); and

WHEREAS, said Smart Energy Fund is administered by the Village for the purposes of helping property owners and tenants of commercial structures within the Village to conserve resources and install high performance, energy efficient and renewable energy systems; and

WHEREAS, pursuant to the Smart Energy Fund the Village, subject to its sole discretion, will reimburse Owners/Lessees for the cost of eligible energy efficiency/ renewable energy improvements to commercial structures within the Village up to a maximum of one-half (1/2) of the approved contract cost of such improvements or $20,000.00, whichever is less; and

WHEREAS, the Owner/Lessee's property is located within the Village, and the Owner/Lessee desires to participate in the Smart Energy Fund pursuant to the terms and provisions of this Agreement.

NOW, THEREFORE, in consideration of the mutual covenants and agreements obtained herein, the Village and the Owner/Lessee do hereby agree as follows:

SECTION 1

With respect to energy efficiency/ renewable energy improvements, the Village shall reimburse an Owner/Lessee for the cost of improvements to the Owner/Lessee's property at the rate of fifty percent (50%) of such cost.

The actual total reimbursement amounts per this Agreement shall not exceed $17,855.00. The improvement costs that are eligible for Village reimbursement include all labor, materials, equipment, and other contract items necessary for the proper execution and completion of the scope of work as shown on the plans, design drawings, specifications and estimates approved by the Village. Such plans, design drawings, specifications, estimates and scope of work are attached hereto as Exhibit A.

The energy efficiency/ renewable energy improvements to be performed pursuant to this Agreement are:

Per Enright's Heating and Cooling bid:
Replace the existing heating and air conditioning systems with four new (4) American Standard Freedom 95 Comfort R Variable Speed Furnaces and three new (3) American Standard Allegiance 16 Air Conditioners. In addition to this, the petitioner is proposing to install three (3) energy efficient thermostats.

Two (2) Allegiance 16 Air Conditioners
- Model #4A7A6024E;
- 2 Ton split system cooling - 1Ph;
- 18.5 SEER (Seasonal Energy Efficiency Ratio);
- Energy Star Qualified;

One (1) Allegiance 16 Air Conditioner
- Model #4A7A6036E;
- 3 Ton split system cooling - Ph;
- 18.5 SEER;
- Energy Star Qualified;

Four (4) Freedom 95 Comfort - R Variable Speed Furnaces
- Model #AUH2B080A9V3VA
- 3 Ton upflow/ horizontal direct vent gas furnace, variable speed inducer, 2 stage heat;
- 96.7 AFUE (Annual Fuel Utilization Efficiency);
- Energy Star Qualified;

SECTION 2

No improvement work shall be undertaken until its design has been submitted to and approved by the Village. Following approval, the Owner/Lessee shall contract for the work and shall commence and complete all such work within ninety (90) days from the date of such approval.

SECTION 3

The Development Services Director shall periodically review the progress of the contractor's work on the energy efficiency/ renewable energy improvements pursuant to this Agreement. Such inspections shall not replace any required permit inspections by the Building Inspectors. All work which is not in conformance with the approved plans, design drawings and specifications shall be immediately remedied by the Owner/Lessee and deficient or improper work shall be replaced and made to comply with the approved plans, design drawings and specifications and the terms of this Agreement.

SECTION 4

Upon completion of the improvements and upon their final inspection and approval by the Development Services Director or his/her designee, the Owner/Lessee shall submit to the Village a properly executed and notarized contractor sworn statement showing the full cost of the work, as well as each separate component amount due to the contractor and each and every subcontractor involved in furnishing labor, materials or equipment in the work. In addition, the Owner/Lessee shall submit to the Village proof of payment of the contract cost pursuant to the contractor's statement and final lien waivers from all contractors and subcontractors. The Owner/Lessee shall also submit to the Village a copy of all of the invoices for professional services fees for preparation of plans and specifications. The Village shall, within thirty (30) days of receipt of the contractor's statement, proof of payment and lien waivers, and the professional services statement, issue a check to the Owner/Lessee as reimbursement for one-half (1/2) of the approved construction cost estimate or one-half (1/2) of the actual construction cost, whichever is less, subject to the limitations set forth in Section 1 hereof.

SECTION 5

If the Owner/Lessee or his contractor fails to complete the improvement work provided for herein in conformity with the time limitation, approved plans, design drawings and specifications and the terms of this Agreement, then upon written notice being given by the Development Services Director to the Owner/Lessee, by certified mail to the address listed above, this Agreement shall terminate and the financial obligation on the part of the Village shall cease and become null and void.

SECTION 6

Upon completion of the improvement work pursuant to this Agreement, the Owner/Lessee shall be responsible for properly maintaining such improvements in finished form and without change or alteration thereto, as provided in this Agreement, unless changes are submitted for review and are approved by the Village Board. Such approval shall not be unreasonably withheld if the proposed changes do not substantially alter the original design concept of the improvements as specified in the plans, design drawings and specifications approved pursuant to this Agreement. In the event the approved energy efficiency/ renewable energy improvements are not properly maintained or alterations are made to the improvements without prior consent from the Village, the Village reserves the right to terminate this Agreement, hold the applicant liable for any architectural design and consultant fees incurred by the Village, and require reimbursement in full for all monies expended towards the project through this Smart Energy Fund.

SECTION 7

This Agreement shall be binding upon the Village and upon the Owner/Lessee and its successors, to said property for a period of ten (10) years from and after the date of completion and approval of the energy efficiency/ renewable energy improvements provided for herein. It shall be the responsibility of the Owner/Lessee to inform subsequent Owner/Lessee(s) of the provisions of this Agreement, and to be aware of the requirement for prior Village approval of any alteration whatsoever to the building energy systems funded by the Smart Energy Fund.

SECTION 8

The Owner/Lessee releases the Village from, and covenants and agrees that the Village shall not be liable for, and covenants and agrees to indemnify and hold harmless the Village and its officials, officers, employees and agents from and against, any and all losses, claims, damages, liabilities or expenses, of every conceivable kind, character and nature whatsoever arising out of, resulting from or in any way connected directly or indirectly with the energy efficiency/ renewable energy improvement(s), including but not limited to actions arising from the Prevailing Wage Act (820 ILCS 30/0.01 et seq.) and the Davis-Bacon Act (40 U.S.C. 3141 *et seq*.) The Owner/Lessee further covenants and agrees to pay for or reimburse the Village and its officials, officers, employees and agents for any and all costs, reasonable attorneys' fees, liabilities or expenses incurred in connection with investigating, defending against or otherwise in connection with any such losses, claims, damages, liabilities, or causes of action. The Village shall have the right to select legal counsel and to approve any settlement in connection with such losses, claims, damages, liabilities, or causes of action. **The provisions of this Section 8, as well as Sections 6 and 7, above, shall survive the completion of said façade improvement(s).**

SECTION 9

Nothing herein is intended to limit, restrict or prohibit the Owner/Lessee from undertaking any other work in or about the subject premises, which is unrelated to the energy efficiency/ renewable energy improvements provided for in this Agreement.

SECTION 10

This Agreement shall be enforceable by any action at law or in equity, including actions for specific performance and injunctive relief. The laws of the State of Illinois shall control the construction and enforcement of this Agreement. The parties agree that all actions instituted on this Agreement shall be commenced and heard in the Circuit Court of Cook County, Illinois, and hereby waive venue in any other court of competent jurisdiction. Before any failure of any party to perform any obligation arising from this Agreement shall be deemed to constitute a breach, the party claiming the breach shall notify the defaulting party and demand performance. No breach of this Agreement shall be found to have occurred if performance is commenced to the satisfaction of the complaining party within thirty (30) days of the receipt of such notice.

IN WITNESS THEREOF, the parties hereto have executed this Agreement on the date first appearing above.

OWNER

Thomas G. Corn RVP

VILLAGE OF ORLAND PARK,
an Illinois home rule municipality

By: _____
Village Administrator

LESSEE (if applicable)

_____

ATTEST: _____
Village Clerk

ENRIGHT'S HEATING & COOLING, INC.

(708) 614-1441

HEATING PROPOSAL

To: Zimmerman & Santana F.H.
9900 W 143rd St.
Orland Park 60462

Date: 9-3-10
Home Phone:
Work Phone:

We propose to furnish:

1	95% Efficient Gas Furnace Model: American Standard BTUs: 2-60K 2-80K
ALL	Gas piping to furnace and leak testing
—	Cement blocks for platform
ALL	Flue pipe from chimney to furnace feet of inch pipe
—	Chimney liner
—	Thermostat Model:
YES	Reconstruction of supply plenum and return air drop
YES	All wiring
YES	Clean work area and remove old equipment
	Plumber needed to run gas line to front system.
	Humidifier Model:
	Electronic Air Cleaner Model:

Equipment Warranties:

5 Year(s) Labor	5 Year(s) Parts	LIFETIME Year(s) Heat Exchanger

TOTAL WITH ALL LABOR INCLUDED: $ SEE PAGE 2 **(taxes additional)**

**** Price includes all sales, rebates, and coupons.****

TERMS: CASH CHECK CREDIT CARD or 1 YEAR SAME AS CASH or 2 YEARS SAME AS CASH

QUOTE GOOD FOR 30 DAYS OR WHILE SUPPLIES LAST

Enright's Heating & Cooling, Inc.
By:

I authorize all above mentioned work to be performed and agree to pay the above total according to the terms listed.

Accepted by: _____ Date: _____

VISA MasterCard AMERICAN EXPRESS DISCOVER

Thank You!

ENRIGHT'S HEATING & COOLING, INC.

Bill Enright
cell # 708
417-4146

(708) 614-1441

COOLING PROPOSAL

To: Zimmerman + Sadaman Flt
9900 W 143rd St
Orl Park 60462

Date: 9-3-10
Home Phone:
Work Phone:

We propose to furnish: 2-2 ton 1-2½ ton

3	Central Air Model: American Standard BTU SEER 15
yes	150 feet of 3/8 and 3/4 copper tubing
3	2.5 ton indoor evaporator coil
3	Slab for condenser support
3	Thermostat Model:
yes	Reconstruction of supply plenum
yes	All wiring of condenser and controls
yes	100 feet of condensate drain pipe to floor drain
	Amp circuit breaker Circuit Breaker Type:
yes	Recover freon
yes	Sealing of all openings made
yes	Clean work area and remove old equipment
	Humidifier Model:
	Electronic Air Cleaner Model:

Equipment Warranties:

5 Year(s) Labor	5 Year(s) Parts	10 Year(s) Compressor

TOTAL WITH ALL LABOR INCLUDED: $ 35,710.00
~~(taxes additional)~~

** Price includes all sales, rebates, and coupons.**

TERMS: CASH CHECK CREDIT CARD or 1 YEAR SAME AS CASH or 2 YEARS SAME AS CASH

QUOTE GOOD FOR 30 DAYS OR WHILE SUPPLIES LAST

Enright's Heating & Cooling, Inc.
By:

I authorize all above mentioned work to be performed and agree to pay the above total according to the terms listed.

Accepted by: _____ Date: _____

VISA MasterCard AMERICAN EXPRESS DISCOVER

Thank You!

CONTRACTOR'S SWORN STATEMENT AND WAIVER OF LIEN TO DATE

Project Name and Address: ZIMMERMAN & SADAMAN FUNERAL HOME 9900 W 143ST

Owner/Lessee's Name: _____

Contractor Name and Position: ENRIGHTS HEATING & COOLING INC

Company Name: BILL ENRIGHT OWNER

Company Address: 9270 CORSAIR DRIVE UNIT #4 FRANKFORT 60423

Contractors, Subcontractors and Professional Service Providers used (attach receipt or paid invoice for the full cost of work performed by each):

Name	Address	Work Completed	Amount Billed	Amount Paid

I, _____, swear that the above (and attached) contractors, subcontractors and professional service providers are the only ones who performed work under the Smart Energy Fund Agreement with the Village of Orland Park for the property identified above, and billed and were paid the amounts shown. I further swear that the above (and attached) contractors, subcontractors and professional service providers met or meet the criteria and requirements of the Davis-Bacon Act.

Date: _____ Signature: _____

Subscribed and Sworn before me this _____ day of _____, 200__ .

Notary Public: _____ Notary Stamp:

FINAL PAYOUT REQUEST – SMART ENERGY FUND

(The following section to be completed by the Village of Orland Park)

Village Approval for Payout by (Planner): _____ Date: _____
Attach final inspection report(s)

Amount Paid to Contractors, Subcontractors and Professional Service Providers: _____

Total amount of Contract: _____

Explanation of Balance: _____

Total Amount in the Smart Energy Fund Agreement: _____

Amount due from the Village: _____

M & E Heating & Cooling, Inc.

15724 S. Leclaire Avenue
Oak Forest, IL 60452
708.535.2225 or 708.385.2225

Proposal and Agreement

Customer Name 2 + SAND FH Phone 460-750[illegible] Date 9-6-10

Address 9900 143 ST Job Address SAME

City, State, Zip OAK PK Work Phone(s) _____

We will furnish, install and service the equipment listed below at the price, terms and conditions outlined on this proposal.

Equipment Specifications

Make AMER. STAND. Model Number(s) _____

SEER 15 EER _____ AFUE 95 Btuh Cooling _____ Btuh Heating _____ CFM ___

Installation shall include: 3 CENTRAL A/C'S 1-2.5 TON
2-2.0 TON

4 - 95% FURNACES 2-60,000
2-80,000

X in boxes = Yes

- ☒ New _____ Amp disconnect
- ☐ New _____ Amp electric service
- ☒ New low voltage wiring
- ☐ New weather resistant equipment stand
- ☒ New reinforced equipment pad
- ☐ New vibration isolation pads
- ☒ New properly sized refrigerant lines
- ☒ New clean, dry ACR copper tubing
- ☐ Insulate refrigerant suction line(s)
- ☐ Install refrigerant drier(s)
- ☒ Charge to manufacturer's specs
- ☒ Evacuate refrigerant system
- ☐ _____

- ☒ Remove existing equipment from premises
- ☒ Install energy saving setback thermostat
- ☐ New copper wire from _____ to _____
- ☒ Make air tight plenum transition
- ☐ _____ new supply diffuser(s)
- ☐ New duct run from _____ to _____
- ☐ Noise reducing flexible duct connector
- ☒ Balance for uniform supply air distribution
- ☐ Provide for external combustion air
- ☒ New gas piping from _____ to _____
- ☐ New vent pipe and cap
- ☒ Clean work area to customer's satisfaction
- ☐ _____

- ☒ New condensate drain system
- ☐ New condensate pump
- ☐ Install aux. condensate drain pan
- ☐ New high efficiency air filter
- ☐ New humidification system
- ☒ New return air filter grill
- ☒ Meet all code requirements
- ☒ Complete system start up
- ☐ 5 year parts warranty
- ☐ 5 year labor warranty
- ☐ 5 year compressor warranty
- ☐ _____ year service agreement
- ☐ _____

☐ Option (below) ☐ Alternative (below) ☐ Is (☐ Is Not) Included in price

Installed Price $ 38,820[illegible]

Taxes $ _____

Total Amount $ _____

Down Payment $ _____

Balance Due $ 38,820[illegible]

Terms: 1/2 down 1/2 upon completion

Acceptance (Customer) Approval (Company)

By _____ Date 9-6-10 By _____ Date _____

Air Conditioners

▶ QUICK ANSWERS
▶ NEWS & KNOWLEDGE
▶ SUPPORT

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Learn about Customer Care™ dealers
How to select the right dealer
Find special offers in your area
Register your products
Attention - Fraud Alert - Job Applicant Scam

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Get AccuClean - the most effective air filtration system in the nation
For fresher, healthier air, check out AccuExchange™
Try a Humidifier for the most comfortable air

▶ ENERGY SAVINGS TIPS
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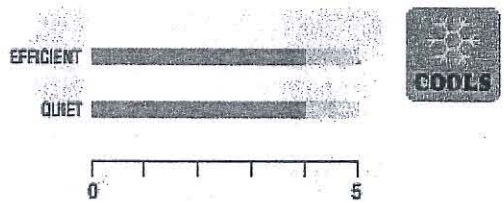
Learn more about USA Energy Tax Credits
Canadian homeowners: Learn about grants available through the ecoENERGY Retrofit-Homes program.

▶ HOME COMFORT CORNER
Explore the Home Comfort Corner
Get tips from lifestyle expert Hannah Keeley

ULTIMATE

Allegiance® 16 Air Conditioner

Generous cooling and incredible energy efficiency.



Click on an icon to learn more.

Key Benefits:

- Surpasses government efficiency standards, helping you save up to 50% on your energy bills while reducing greenhouse gas emissions*
- Many models meet efficiency requirements for a federal energy tax credit when installed as part of a complete system. **
- Contains a two-step Duration™ compressor with two-stage cooling which runs at 70% capacity most of the time, and steps up to the second stage on the hottest days
- So quiet, you barely notice it's running
- Provides more efficient and reliable cooling, thanks to durable single-row Spine Fin™ coil
- Cools with an environmentally friendly refrigerant that's ozone-safe.
- Rust-resistant coating, screws and basepan protect system from the elements

*Potential energy savings may vary depending on your lifestyle, system settings, equipment maintenance, local climate, home construction and installation of equipment and duct system.

**Subject to IRS regulations. Customers should consult a tax professional for advice on tax preparation.

compare air conditioners→

▶ Warranty Information

▼ **Specifications**

Allegiance® 16 Air Conditioners (R-410A)

Model	TONNAGE	Capacity	H"	W"	D"	Shipping Weight (lb)
4A7A6024E	2.0	24,000	41	37	34	276
4A7A6036E	3.0	36,000	45	37	34	283
4A7A6048E	4.0	48,000	45	37	34	308
4A7A6060E	5.0	60,000	45	37	34	312

As an ENERGY STAR® Partner, American Standard Heating & Air Conditioning has determined that some models meet the ENERGY STAR® guidelines for energy efficiency.

The Allegiance® 16 is an important part of this matched system:

Allegiance® 16 Air Conditioner

Freedom® 80 Comfort-R™ Communicating

All-Aluminum High Efficiency Coil

Power Humidifier

800 Family Comfort Control

AccuClean™ Whole House Air Filtration System

AccuExchange™ Energy Recovery Ventilator

HELP ME CHOOSE A SYSTEM →

American Standard Heating & Air Conditioning is an international indoor and outdoor Air Conditioner manufacturer, providing air handlers, heat pumps, heating systems, furnaces, and programmable thermostats. American Standard Heating & Air Conditioning also provides clean and affordable cooling and heating, humidifiers, indoor air quality and clean air systems. Efficiency. Reliability. Quality. That's what makes American Standard Heating & Air Conditioning.

American Standard
HEATING & AIR CONDITIONING

4A7A6024E-SUB-100.00

TAG: _____

SUBMITTAL

2 Ton Split System Cooling — 1 Ph
4A7A6024E

NOTE: All dimensions are in mm/inches.

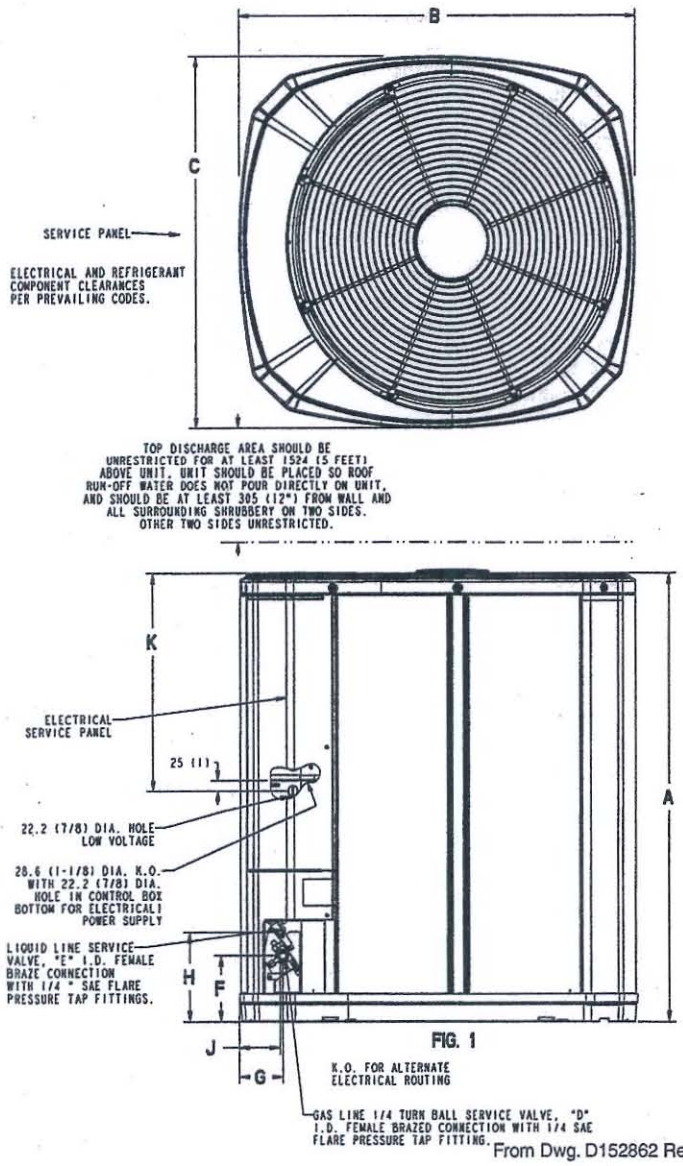


FIG. 1

From Dwg. D152862 Rev. 21

MODELS	BASE	A	B	C	D	E	F	G	H	J	K
4A7A6024E	4	1045 (41-1/8)	946 (37-1/4)	870 (34-1/4)	5/8	3/8	152 (6)	98 (3-7/8)	219 (8-5/8)	86 (3-3/8)	711 (28)

Product Specifications

OUTDOOR UNIT ①②	**4A7A6024E1000A**
POWER CONNS. — V/PH/HZ ③	230/1/60
MIN. BRCH. CIR. AMPACITY	14
BR. CIR. PROT. RTG. – MAX. (AMPS)	20
COMPRESSOR	DURATION™ - SCROLL
NO. USED - NO. STAGES	1 - 2
VOLTS/PH/HZ	230/1/60
R.L. AMPS ⑦ - L.R. AMPS	10.3 - 52
FACTORY INSTALLED	
START COMPONENTS ⑧	NO
INSULATION/SOUND BLANKET	NO
COMPRESSOR HEAT	NO
OUTDOOR FAN	PROPELLER
DIA. (IN.) - NO. USED	27.6 - 1
TYPE DRIVE - NO. SPEEDS	DIRECT - 1
CFM @ 0.0 IN. W.G. ④	3200
NO. MOTORS - HP	1 - 1/8
MOTOR SPEED R.P.M.	835
VOLTS/PH/HZ	200/230/1/60
F.L. AMPS	0.60
OUTDOOR COIL — TYPE	SPINE FIN™
ROWS - F.P.I.	1 - 24
FACE AREA (SQ. FT.)	27.86
TUBE SIZE (IN.)	3/8
REFRIGERANT	R-410A
LBS. — R-410A (O.D. UNIT) ⑤	9 LBS.- 13 OZ.
FACTORY SUPPLIED	YES
LINE SIZE - IN. O.D. GAS ⑥	5/8
LINE SIZE - IN. O.D. LIQ. ⑥	3/8
CHARGING SPECIFICATION	
SUBCOOLING	9°F
DIMENSIONS	H X W X D
CRATED (IN.)	46.4 X 35.1 X 38.7
WEIGHT	
SHIPPING (LBS.)	276
NET (LBS.)	240

① Certified in accordance with the Air-Source Unitary Air-conditioner Equipment certification program, which is based on ARI standard 210/240. In order to achieve ARI standard rating, the indoor fan time delay on the comfort control must be enabled.
② Rated in accordance with ARI standard 270.
③ Calculated in accordance with Natl. Elec. Codes. Use only HACR circuit breakers or fuses.
④ Standard Air — Dry Coil — Outdoor
⑤ This value approximate. For more precise value see unit nameplate.
⑥ Max. linear length 60 ft.; Max. lift - Suction 25 ft.; Max lift - Liquid 25 ft. For greater length consult refrigerant piping software Pub. No. 32-3312-0* (* denotes latest revision).
⑦ This value shown for compressor RLA on the unit nameplate and on this specification sheet is used to compute minimum branch circuit ampacity and max. fuse size. The value shown is the branch circuit selection current.
⑧ No means no start components. Yes means quick start kit components. PTC means positive temperature coefficient starter.

A-weighted Sound Power Level [dB(A)]

MODEL	SOUND POWER LEVEL [dB(A)]	A-WEIGHTED FULL OCTAVE SOUND POWER LEVEL dB - [dB(A)]							
		63	125	250	500	1000	2000	4000	8000
4A7A6024E	72	43.7	52.6	54.3	62.4	60.4	57	54.1	46.6

Note: Rated in accordance with AHRI Standard 270-2008

Mechanical Specification Options

General
The 4A7A6 is fully charged from the factory for matched indoor section and up to 15 feet of piping. This unit is designed to operate at outdoor ambient temperatures as high as 115°F. Cooling capacities are matched with a wide selection of air handlers and furnace coils that are A.R.I. certified. The unit shall be certified to UL 1995. Exterior is designed for outdoor application.

Casing
Unit casing is constructed of heavy gauge, G60 galvanized steel and painted with a weather-resistant powder paint on all louvers and panels. Corrosion and weatherproof CMBP-G30 DuraBase™ base.

Refrigerant Controls
Refrigeration system controls include condenser fan, compressor contactor and high pressure switch. High and low pressure controls are inherent to the compressor. A factory installed liquid line drier is standard.

Compressor
The Duration ® 2-stage compressor features internal over temperature and pressure protection and hermetic motor. Other features include: roto lock suction and discharge refrigerant connections, centrifugal oil pump and modular plugs for electrical connections.

Condenser Coil
The outdoor coil provides low airflow resistance and efficient heat transfer. The coil is protected on all four sides by louvered panels.

Low Ambient Cooling
As manufactured, this unit has a cooling capability to 55°F. For low ambient cooling below 55° see Application Guide APP-APG014-EN.

ARI PERFORMANCE CERTIFIED™
ARI Standard 210/240 UAC

INTERTEK ETL CM LISTED C US

American Standard
HEATING & AIR CONDITIONING

03/10

American Standard
HEATING & AIR CONDITIONING

4A7A6036E-SUB-101.00

TAG: _____

SUBMITTAL

3 Ton Split System Cooling — 1 Ph
4A7A6036E

NOTE: All dimensions are in mm/inches.

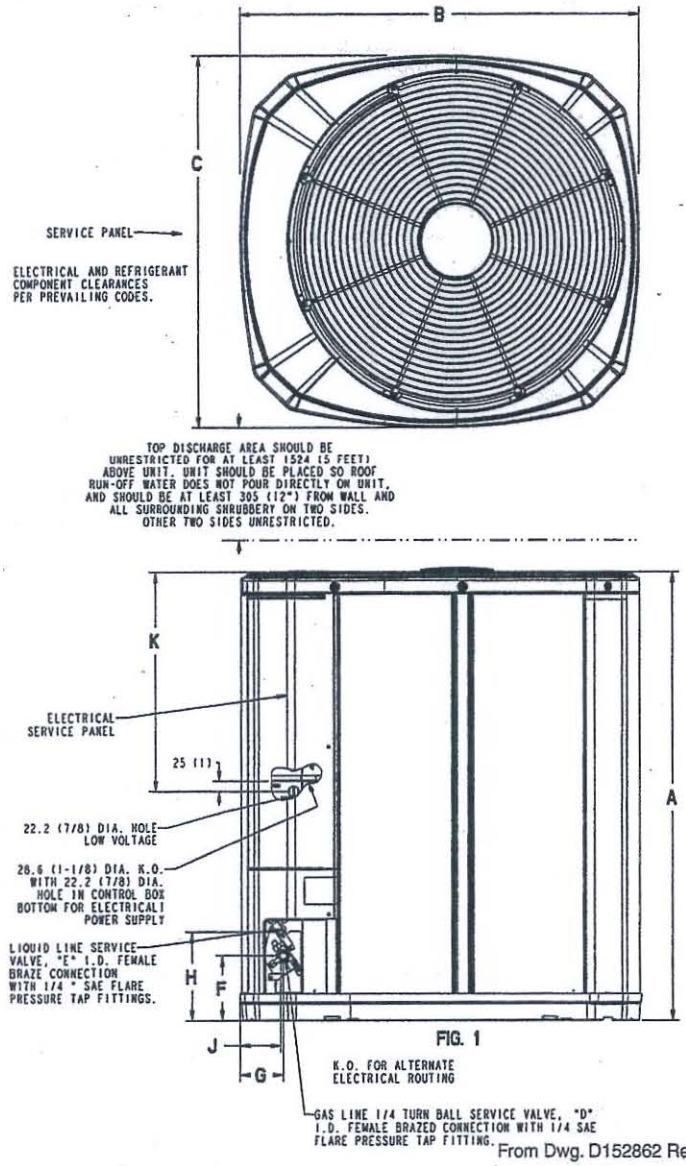


FIG. 1

From Dwg. D152862 Rev. 26

MODELS	BASE	A	B	C	D	E	F	G	H	J	K
4A7A6036E	4	1147 (45-1/8)	946 (37-1/4)	870 (34-1/4)	3/4	3/8	152 (6)	98 (3-7/8)	219 (8-5/8)	86 (3-3/8)	831 (32)

Product Specifications

OUTDOOR UNIT ①②	**4A7A6036E1000A**
POWER CONNS. — V/PH/HZ ③	230/1/60
MIN. BRCH. CIR. AMPACITY	22
BR. CIR. PROT. RTG. – MAX. (AMPS)	35
COMPRESSOR	DURATION™ - SCROLL
NO. USED - NO. STAGES	1 - 2
VOLTS/PH/HZ	230/1/60
R.L. AMPS ⑦ - L.R. AMPS	16.7 - 82
FACTORY INSTALLED	
START COMPONENTS ⑧	NO
INSULATION/SOUND BLANKET	NO
COMPRESSOR HEAT	NO
OUTDOOR FAN	PROPELLER
DIA. (IN.) - NO. USED	27.6 - 1
TYPE DRIVE - NO. SPEEDS	DIRECT - 1
CFM @ 0.0 IN. W.G. ④	3700
NO. MOTORS - HP	1 - 1/8
MOTOR SPEED R.P.M.	835
VOLTS/PH/HZ	200/230/1/60
F.L. AMPS	0.70
OUTDOOR COIL — TYPE	SPINE FIN™
ROWS - F.P.I.	1 - 24
FACE AREA (SQ. FT.)	30.79
TUBE SIZE (IN.)	3/8
REFRIGERANT	R-410A
LBS. — R-410A (O.D. UNIT) ⑤	9 LBS.- 13 OZ.
FACTORY SUPPLIED	YES
LINE SIZE - IN. O.D. GAS ⑥	3/4
LINE SIZE - IN. O.D. LIQ. ⑥	3/8
CHARGING SPECIFICATION	
SUBCOOLING	9°F
DIMENSIONS	H X W X D
CRATED (IN.)	51.0 X 35.1 X 38.7
WEIGHT	
SHIPPING (LBS.)	283
NET (LBS.)	245

① Certified in accordance with the Air-Source Unitary Air-conditioner Equipment certification program, which is based on ARI standard 210/240. In order to achieve ARI standard rating, the indoor fan time delay on the comfort control must be enabled.
② Rated in accordance with ARI standard 270.
③ Calculated in accordance with Natl. Elec. Codes. Use only HACR circuit breakers or fuses.
④ Standard Air — Dry Coil — Outdoor
⑤ This value approximate. For more precise value see unit nameplate.
⑥ Max. linear length 60 ft.; Max. lift - Suction 25 ft.; Max lift - Liquid 25 ft. For greater length consult refrigerant piping software Pub. No. 32-3312-0* (* denotes latest revision).
⑦ This value shown for compressor RLA on the unit nameplate and on this specification sheet is used to compute minimum branch circuit ampacity and max. fuse size. The value shown is the branch circuit selection current.
⑧ No means no start components. Yes means quick start kit components. PTC means positive temperature coefficient starter.

A-weighted Sound Power Level [dB(A)]

MODEL	SOUND POWER LEVEL [dB(A)]	A-WEIGHTED FULL OCTAVE SOUND POWER LEVEL dB - [dB(A)]							
		63	125	250	500	1000	2000	4000	8000
4A7A6036E	72	38	50.4	56.8	60.4	59.8	57.2	55.2	49.2

Note: Rated in accordance with AHRI Standard 270-2008

Mechanical Specification Options

General
The 4A7A6 is fully charged from the factory for matched indoor section and up to 15 feet of piping. This unit is designed to operate at outdoor ambient temperatures as high as 115°F. Cooling capacities are matched with a wide selection of air handlers and furnace coils that are A.R.I. certified. The unit shall be certified to UL 1995. Exterior is designed for outdoor application.

Casing
Unit casing is constructed of heavy gauge, G60 galvanized steel and painted with a weather-resistant powder paint on all louvers and panels. Corrosion and weatherproof CMBP-G30 DuraBase™ base.

Refrigerant Controls
Refrigeration system controls include condenser fan, compressor contactor and high pressure switch. High and low pressure controls are inherent to the compressor. A factory installed liquid line drier is standard.

Compressor
The Duration ® 2-stage compressor features internal over temperature and pressure protection and hermetic motor. Other features include: roto lock suction and discharge refrigerant connections, centrifugal oil pump and modular plugs for electrical connections.

Condenser Coil
The outdoor coil provides low airflow resistance and efficient heat transfer. The coil is protected on all four sides by louvered panels.

Low Ambient Cooling
As manufactured, this unit has a cooling capability to 55°F. For low ambient cooling below 55° see Application Guide APP-APG014-EN.

ARI PERFORMANCE CERTIFIED
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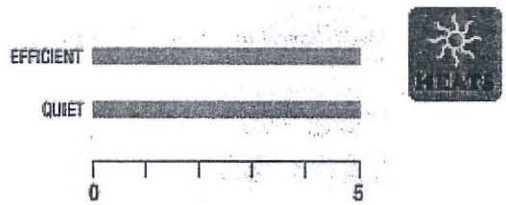
PREMIUM

Freedom® 95 Comfort-R™ Variable Speed Furnace

Ultimate efficiency meets superior comfort



Click on an icon to learn more.

Key Benefits:

- Provides two-stage heating, running at an energy-saving 65% capacity more than 80% of the time, which reduces temperature swings and may help lower your heating bills*
- Converts up to 96.7% of the fuel you pay for into heat for your home
- Significantly surpasses government efficiency standards, helping you save on your energy bills while reducing greenhouse gas emissions*
- Qualifies for a possible federal energy tax credit**
- Runs quietly and evenly distributes warm air to every room with its variable speed fan motor
- In the summer, Comfort-R™ helps keep your home cooler by reducing indoor humidity
- Its heavy steel insulated cabinet is durable, quiet, and holds more heat in the furnace to better warm your home

*Potential energy savings may vary depending on your lifestyle, system settings, equipment maintenance, local climate, home construction and installation of equipment and duct system.

**Taxpayers should consult with a tax advisor to determine what qualifies for a tax credit or refer to the rules of the Internal Revenue Code

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▶ Warranty Information

▼ Specifications

Freedom 95® Variable Speed, Two-Stage, Upflow/Horizontal

Shipping

Model	TONNAGE	Stage 1 Capacity	Stage 2 Capacity	H"	W"	D"	Weight (lb)
AUH2B060A9V3VA	3	37,700	58,000	40.0	17.5	28.0	158
AUH2B080A9V3VA	3	49,500	76,000	40.0	17.5	28.0	168
AUH2C100A9V4VA	4	61,800	95,000	40.0	21.0	28.0	197
AUH2D120A9V5VA	5	74,500	114,700	40.0	24.5	28.0	206

Freedom 95® Variable Speed, Two-Stage, Downflow/Horizontal

Model	TONNAGE	Stage 1 Capacity	Stage 2 Capacity	H"	W"	D"	Shipping Weight (lb)
ADH2B060A9V3VA	3	37,000	57,000	40.0	17.5	28.0	160
ADH2B080A9V3VA	3	49,400	76,000	40.0	17.5	28.0	168
ADH2C100A9V4VA	4	61,800	95,000	40.0	21.0	28.0	185
ADH2D120A9V5VA	4	74,000	114,000	40.0	24.5	28.0	206

Convertible to horizontal; 2-stage gas valve; 2-speed power venter; PVC venting; Variable speed blower; Multi-port In-shot burners; Heavy gauge aluminized steel heat exchanger up to 96.7 AFUE; Lifetime limited primary heat exchanger or secondary heat exchanger warranty; 5-year limited parts warranty.

As an ENERGY STAR® Partner, American Standard Heating & Air Conditioning has determined that some models meet the ENERGY STAR® guidelines for energy efficiency.

The Freedom® 95 Comfort-R™ is an important part of this matched system:

Allegiance® 18 Air Conditioner

Freedom® 95 Comfort-R™ Var. Speed Furnace

Power Humidifier

800 Family Comfort Control

AccuClean™ Whole House Air Filtration System

AccuExchange™ Energy Recovery Ventilator

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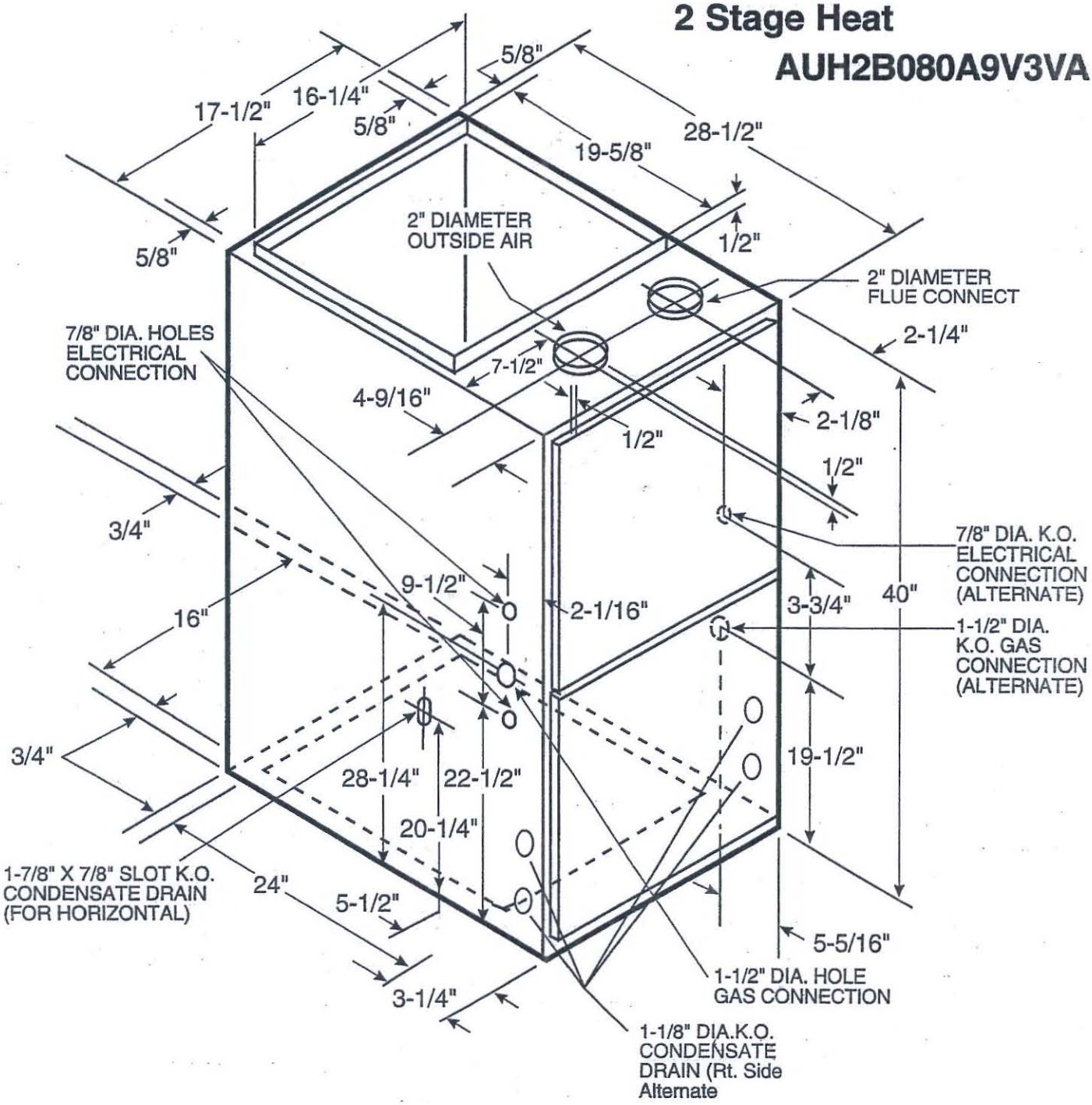
American Standard
HEATING & AIR CONDITIONING

AUH2B080-SPEC-1A

TAG: _____

SPECIFICATION

Upflow / Horizontal
Direct Vent Gas Furnace
Variable Speed Inducer
2 Stage Heat
AUH2B080A9V3VA



*UH2B080FURNACE HEATING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER									
1st Stage Capacity = 49,500 2nd Stage Capacity = 76,000									
	AIRFLOW SETTING	DIP SWITCH SETTING			EXTERNAL STATIC PRESSURE				
		SW 7	SW 8		0.1	0.3	0.5	0.7	0.9
HEATING 1ST STAGE	LOW	ON	ON	CFM TEMP. RISE WATTS	800 56 105	800 56 140	800 56 180	800 56 220	800 56 265
	MEDIUM LOW	OFF	ON	CFM TEMP. RISE WATTS	860 52 115	880 51 165	890 50 215	920 48 265	910 49 320
	NORMAL **	ON	OFF	CFM TEMP. RISE WATTS	960 46 150	990 45 200	1000 44 230	1020 44 310	1010 44 350
	HIGH	OFF	OFF	CFM TEMP. RISE WATTS	1080 41 195	1110 40 255	1120 40 315	1120 40 365	1080 41 390
HEATING 2ND STAGE	LOW	ON	ON	CFM TEMP. RISE WATTS	1100 62 205	1100 62 260	1120 61 320	1120 61 370	1090 63 400
	MEDIUM LOW	OFF	ON	CFM TEMP. RISE WATTS	1210 57 265	1240 55 340	1260 54 410	1260 54 470	1130 61 430
	NORMAL **	ON	OFF	CFM TEMP. RISE WATTS	1360 50 365	1390 49 445	1400 49 500	1360 50 535	1210 57 475
	HIGH	OFF	OFF	CFM TEMP. RISE WATTS	1360 50 355	1390 49 450	1400 49 520	1350 51 535	1180 58 465

NOTES:
* First letter may be "A" or "T"
** Factory setting

*UH2B080 FURNACE COOLING AIRFLOW (CFM) AND POWER (WATTS) VS. EXTERNAL STATIC PRESSURE WITH FILTER											
OUTDOOR UNIT SIZE (TONS)	AIRFLOW SETTING	DIP SWITCH SETTING					EXTERNAL STATIC PRESSURE				
		SW 1	SW 2	SW 3	SW 4		0.1	0.3	0.5	0.7	0.9
2.0	LOW (350 CFM/TON)	ON	ON	OFF	ON	CFM WATTS	750 84	750 122	750 154	720 185	710 221
	NORMAL (400 CFM/TON)	ON	ON	OFF	OFF	CFM WATTS	840 109	840 146	840 181	840 226	820 264
	HIGH (450 CFM/TON)	ON	ON	ON	OFF	CFM WATTS	940 136	940 177	940 215	940 274	940 318
2.5	LOW (350 CFM/TON)	OFF	ON	OFF	ON	CFM WATTS	850 113	850 150	870 200	890 250	890 295
	NORMAL (400 CFM/TON)	OFF	ON	OFF	OFF	CFM WATTS	960 150	990 200	1000 230	1020 305	1010 350
	HIGH (450 CFM/TON)	OFF	ON	ON	OFF	CFM WATTS	1080 195	1110 255	1120 315	1120 365	1080 390
3.0	LOW (350 CFM/TON)	ON	OFF	OFF	ON	CFM WATTS	1020 175	1020 225	1040 280	1050 330	1050 375
	NORMAL (400 CFM/TON)	ON	OFF	OFF	OFF	CFM WATTS	1170 240	1180 300	1200 365	1200 415	1130 420
	HIGH (450 CFM/TON)	ON	OFF	ON	OFF	CFM WATTS	1290 310	1320 410	1350 470	1340 520	1150 440
3.5	LOW (350 CFM/TON)	OFF	OFF	OFF	ON	CFM WATTS	1170 250	1190 315	1210 370	1210 435	1100 405
	NORMAL (400 CFM/TON)	OFF	OFF	OFF	OFF	CFM WATTS	1360 365	1390 445	1400 500	1360 535	1210 475
	HIGH (450 CFM/TON)	OFF	OFF	ON	OFF	CFM WATTS	1360 355	1390 450	1400 520	1350 535	1180 460

NOTES: * First letter may be "A" or "T"
1. At continuous fan setting: Heating or Cooling airflows are approximately 50% of selected cooling value.
2. LOW airflow (350 cfm/ton) is COMFORT & HUMID CLIMATE setting;
NORMAL airflow (400 cfm/ton) is typical setting;
HIGH airflow (450 cfm/ton) is DRY CLIMATE setting.

NORMAL airflow (400 cfm/ton) is typical setting;
HIGH airflow (450 cfm/ton) is DRY CLIMATE setting.

INDOOR BLOWER TIMING

Heating: The ICM Fan Control controls the variable speed indoor blower. The blower "on" time is fixed at 45 seconds after ignition. The FAN-OFF period is field selectable by dip switches #2 and #3 on the Integrated Furnace Control at 60, 100, 140, or 180 seconds. The factory setting is 100 seconds, (See unit wiring diagram).

Cooling: The fan delay-off period is set by dip switches on the ICM Fan Control board connected to the Integrated Furnace Control. The options for cooling delay off is field selectable by dip switches #5 and #6. However, dip switch #1 on the Integrated Furnace Control must be set to "ON" for cooling mode to function properly.

The following table and graph explain the delay-off settings:

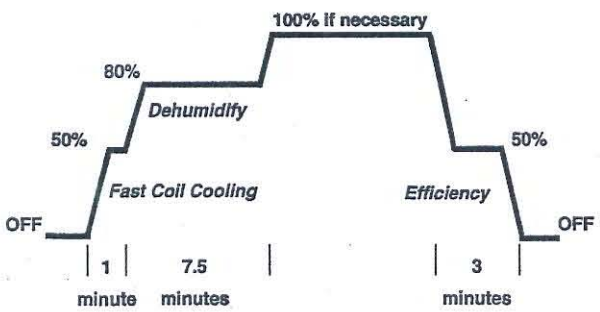
** - This selection provides a ramping up and ramping down of the blower speed to provide improved comfort, quietness, and potential energy savings. The graph below shows the ramping process.

COOLING OFF - DELAY OPTIONS

SWITCH SETTINGS		SELECTION	NOMINAL AIRFLOW
5 - OFF	6 - OFF	NONE	SAME
5 - ON	6 - OFF	1.5 MINUTES	100% *
5 - OFF	6 - ON	3 MINUTES	50%
5 - ON	6 - ON	**	50 - 100%

* - This setting is equivalent to BAY24X045 relay benefit

** - This selection provides ***ENHANCED MODE,*** which is a ramping up and ramping down of the blower speed to provide improved comfort, quietness, and potential energy savings. See Wiring Diagram notes on the unit or in the Service Facts for complete wiring setup for ***ENHANCED MODE.*** The graph which follows, shows the ramping process.



GENERAL DATA ①

MODEL	*UH2B080A9V3VA
TYPE	Upflow / Horizontal
RATINGS ②	
1st Stage Input BTUH	52,000
1st Stage Capacity BTUH (ICS) ③	49,500
2nd Stage Input BTUH	80,000
2nd Stage Capacity BTUH (ICS) ③	76,000
AFUE	95
Temp. rise (Min.-Max.) °F.	35 - 65
BLOWER DRIVE	DIRECT
Diameter - Width (In.)	10 x 8
No. Used	1
Speeds (No.)	Variable
CFM vs. in. w.g.	See Fan Performance Table
Motor HP	1/2
R.P.M.	Variable
Volts / Ph / Hz	115/1/60
COMBUSTION FAN - Type	Centrifugal
Drive - No. Speeds	Direct - Variable
Motor HP - RPM	1/50 - 5000
Volts / Ph / Hz	33 - 110/3/60 - 180
FLA	1.0
FILTER — Furnished?	Yes
Type Recommended	High Velocity
Hi Vel. (No.-Size-Thk.)	1 - 17x25 - 1 in.
VENT — Size (in.)	2 Round
HEAT EXCHANGER	
Type -Fired	Aluminized Steel - Type I
-Unfired	
Gauge (Fired)	20
ORIFICES — Main	
Nat. Gas. Qty. — Drill Size	4 — 45
LP. Gas Qty. — Drill Size	4 — 56
GAS VALVE	Redundant - Two Stage
PILOT SAFETY DEVICE	
Type	Hot Surface Igniter
BURNERS — Type	Multiport Inshot
Number	4
POWER CONN. — V / Ph / Hz ④	115/1/60
Ampacity (In Amps)	11.1
Max. Overcurrent Protection (Amps)	15
PIPE CONN. SIZE (IN.)	1/2
DIMENSIONS	H x W x D
Crated (In.)	41-3/4 x 19-1/2 x 30-1/2
WEIGHT	
Shipping (Lbs.) / Net (Lbs)	168 / 156

① Central Furnace heating designs are certified to ANSI Z21.47 / CSA 2.3
② For U.S. applications, above input ratings (BTUH) are up to 2,000 feet, derate 4% per 1,000 feet for elevations above 2,000 feet above sea level.
For Canadian applications, above input ratings (BTUH) are up to 4,500 feet, derate 4% per 1,000 feet for elevations above 4,500 feet above sea level.
③ Based on U.S. government standard tests.
④ The above wiring specifications are in accordance with National Electrical Code; however, installations must comply with local codes.

Mechanical Specifications

NATURAL GAS MODELS
Central Heating furnace designs are certified to ANSI Z21.47 / CSA 2.3 for both natural and LP. gas. Limit setting and rating data were established and approved under standard rating conditions using American National Standards Institute standards.

SAFE OPERATION
The Integrated System Control has solid state devices, which continuously monitor for presence of flame, when the system is in the heating mode of operation. Dual solenoid combination gas valve and regulator provide extra safety.

QUICK HEATING
Durable, cycle tested, heavy gauge **aluminized steel heat exchanger** quickly transfers heat to provide warm conditioned air to the structure. **Low energy power vent blower,** to increase efficiency and provide a positive discharge of gas fumes to the outside.

BURNERS
Multiport Inshot burners will give years of quiet and efficient service. All models can be converted to **LP. gas** without changing burners.

INTEGRATED SYSTEM CONTROL
Exclusively designed operational program provides total control of furnace limit sensors, blowers, gas valve, flame control and includes self diagnostics for ease of service. Also contains connection points for E.A.C./ Humidifier.

AIR DELIVERY
The variable speed blower motor, has sufficient airflow for most heating and cooling requirements, will switch from heating to cooling speeds on demand from room thermostat. The blower door safety switch will prevent or terminate furnace operation when the blower door is removed.

SECONDARY HEAT EXCHANGER
The FREEDOM 95 has a special type 29-4C™ stainless steel secondary heat exchanger to reclaim heat from flue gases which would normally be lost instead.

STYLING
Heavy gauge steel and "wrap-around" cabinet construction is used in the cabinet with baked-on enamel finish for strength and beauty. The heat exchanger section of the cabinet is completely lined with foil faced fiberglass insulation. This results in quiet and efficient operation due to the excellent acoustical and insulating qualities of fiberglass. Built-in bottom pan and alternate bottom, left or right side return air connection provision.

FEATURES AND GENERAL OPERATION
The FREEDOM 95 High Efficiency Gas Furnaces employ an Adaptive Heat Up Silicon Nitride Hot Surface Ignition system, which eliminates the waste of a constant burning pilot. The integrated system control lights the main burners upon a demand for heat from the room thermostat. Complete front service access.

a. Low energy power venter
b. Vent proving pressure switch.

American Standard
Heating & Air Conditioning
6200 Troup Highway
Tyler, TX 75711-9010
www.americanstandardair.com