Comfortmaker®
Air Conditioning & Heating

CSH6

SoftSound™ SX 2500

Product Specifications

16 SEER SINGLE–STAGE HEAT PUMP WITH OBSERVER® COMMUNICATING CONTROL SYSTEM

1–1/2 THRU 5 TONS SPLIT SYSTEM
208 / 230 Volt, 1–phase, 60 Hz

REFRIGERATION CIRCUIT

- Scroll compressors on all models
- Suction line accumulator factory installed
- Bi–flow filter–drier included for field installation
- Integrated solid state control with Time–Temperature Defrost
- External high and low refrigerant service ports
- Copper tube / aluminum fin coil

PERFORMANCE

- Communicating, self–configuring operation when used with Observer® Wall Control (TSTAT0201CW)
- Outdoor temperature sensor factory installed
- Compressor sound blanket standard
- Isolation compressor grommets



TSTAT0201CW
Recommended
(sold separately)



EASY TO INSTALL AND SERVICE

- Text based diagnostics with Observer® Communicating Wall Control
- Easy access service valves on all models
- Innovative control box design
- High and low pressure switches
- Only two screws to access control panel
- Factory charged with R–410A refrigerant

BUILT TO LAST

- High gloss, baked–on powder coat finish over galvanized steel
- Post–painted (black) coil fins
- Coated, weather–resistant cabinet screws
- Coated inlet grille with 3/8" (10mm) spacing for extra protection
- Corner posts for extra strength and style

c UL us LISTED

AHRI CERTIFIED™ www.ahridirectory.org

Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org .

LIMITED WARRANTY*

- 5 year No Hassle Replacement™ limited warranty
- 5 year parts limited warranty (including compressor and coil)
  - – With timely registration, an additional 5 year parts limited warranty (including compressor and coil)

***** Applies to original purchaser/homeowner, some limitations may apply. See Warranty certificate for complete details.

Model Number	Size (tons)	Nominal Btu/hr	Min. Circuit Ampacity	Max. Fuse or Breaker	Operating Dimensions depth x width x height in. (mm)	Ship / Operate Weight lbs. (kg)
CSH618GKA	1–1/2	18,000	13.6	20	31–3/16 x 31–3/16 x 35–1/2 (792.5 x 792.5 x 902.0)	213 / 181 (96.6 / 82.1)
CSH624GKA	2	24,000	15.5	25	35 x 35 x 33–5/8 (889.0 x 889.0 x 853.5)	232 / 194 (105.2 / 88.0)
CSH630GKA	2–1/2	30,000	19.9	30	35 x 35 x 33–5/8 (889.0 x 889.0 x 853.5)	267 / 229 (121.1 / 103.9)
CSH636GKA	3	36,000	21.6	35	35 x 35 x 33–5/8 (889.0 x 889.0 x 853.5)	275 / 237 (124.7 / 107.5)
CSH642GKA	3–1/2	42,000	27.8	40	35 x 35 x 33–5/8 (889.0 x 889.0 x 853.5)	293 / 255 (132.9 / 115.7)
CSH648GKA	4	48,000	31.8	45	35 x 35 x 33–5/8 (889.0 x 889.0 x 853.5)	298 / 260 (135.2 / 117.9)
CSH660GKA	5	60,000	33.9	50	35 x 35 x 47–3/16 (889.0 x 889.0 x 1199.0)	363 / 317 (164.7 / 143.8)

OUTDOOR UNIT MODEL NUMBER IDENTIFICATION GUIDE (single phase)

Digit Position:	1	2	3	4	5, 6	7	8	9	10	11	12
Example Part Number:	**C**	**S**	**H**	**6**	**18**	**G**	**K**	**A**	**1**	**0**	**1**

C = Comfortmaker Mainline — **BRANDING**

S = Single stage communicating — **KEY CHARACTERISTIC**

A = Air Conditioner
H = Heat Pump — **TYPE**

3 = 13 SEER
4 = 14 SEER
5 = 15 SEER
6 = 16 SEER
7 = 17 SEER
8 = 18 SEER — **NOMINAL EFFICIENCY**

18 = 18,000 BTUH = 1–1/2 tons
24 = 24,000 BTUH = 2 tons
30 = 30,000 BTUH = 2–1/2 tons
36 = 36,000 BTUH = 3 tons
42 = 42,000 BTUH = 3–1/2 tons
48 = 48,000 BTUH = 4 tons
60 = 60,000 BTUH = 5 tons — **NOMINAL CAPACITY**

A = Standard Grille
G = Coil Guard Grille

K = 208/230–1–60 — **VOLTAGE**

Sales Code

Engineering Revision

Extra Digit

Extra Digit

ACCESSORIES PART NUMBER IDENTIFICATION GUIDE

Digit Position:	1	2	3	4	5	6, 7	8, 9	10, 11
Example Part Number:	**N**	**A**	**S**	**A**	**0**	**0 1**	**01**	**C H**

N = Non–Branded

A = Accessory — **PRODUCT GROUP**

S = Split System (AC & HP) — **KIT USAGE**

A = Original
B = 2nd Generation — **MAJOR SERIES**

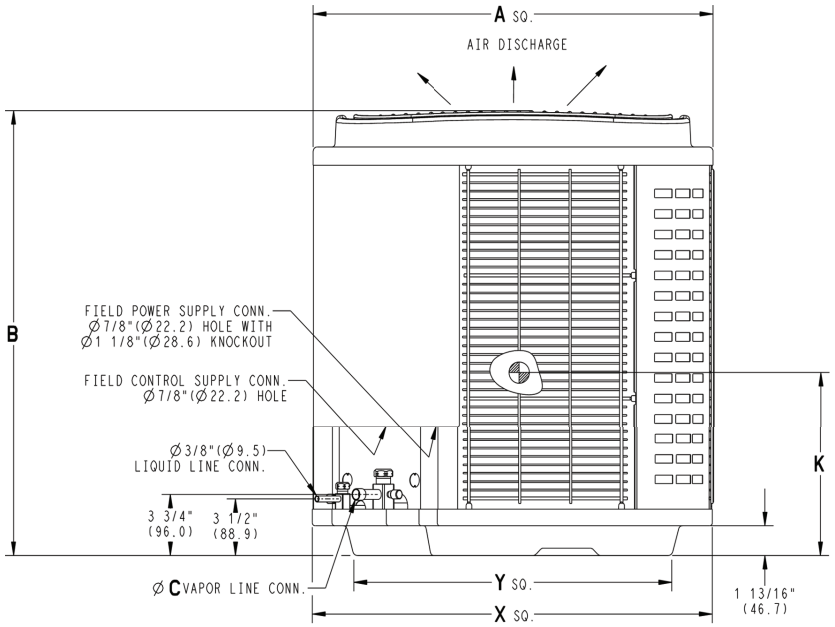
0 = Generic or Not Applicable
4 = R–410A — **REFRIGERANT**

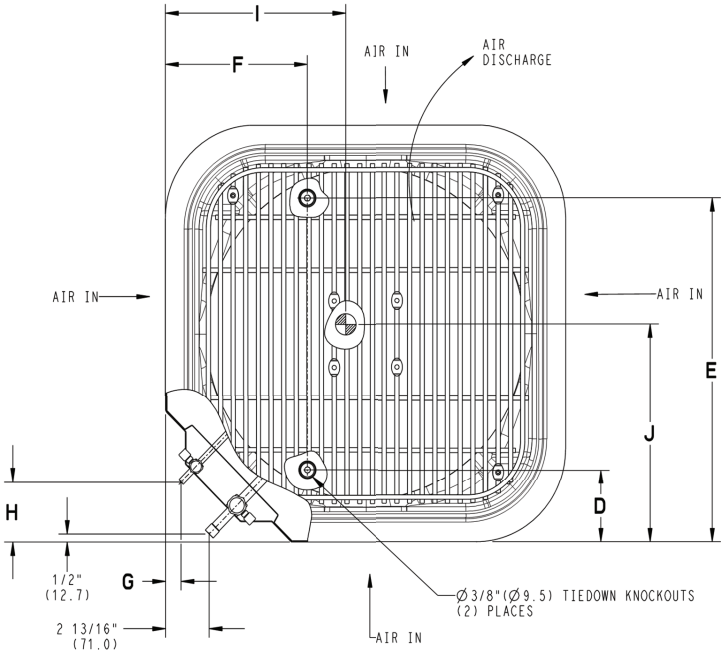
Product Identifier Number

Package Quantity

Type of Kit (Example: CH = Crankcase Heater)

UNIT	SERIES	ELECTRICAL CHARACTERISTICS				A		B		C		D		E		F		G		H		I		J		K		OPERATING WEIGHT		SHIPPING WEIGHT		SHIPPING LENGTH / WIDTH (Sq.)		SHIPPING HEIGHT	
						INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	Lbs	Kgs	Lbs	Kgs	INCH	MM	INCH	MM
CSH618GKA101	1	Y	N	N	N	31 3/16	792.5	35 1/2	902.0	5/8	15.9	6 9/16	166.1	24 11/16	626.3	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	15 3/4	400.1	16	406.4	16 1/4	412.8	181	82.1	213	96.6	33 5/16	846.6	40	1015.8
CSH624GKA101	1	Y	N	N	N	35	889.0	33 5/8	853.5	5/8	15.9	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	17 1/2	444.5	17 7/8	454.0	15 5/8	396.9	194	88.0	232	105.2	37 1/8	943.1	40	1015.8
CSH630GKA101	1	Y	N	N	N	35	889.0	33 5/8	853.5	3/4	19.1	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	17 1/4	438.2	16 7/8	428.6	15 3/4	400.1	229	103.9	267	121.1	37 1/8	943.1	40	1015.8
CSH636GKA101	1	Y	N	N	N	35	889.0	33 5/8	853.5	3/4	19.1	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	17 3/8	441.3	17 1/2	444.5	13 3/4	349.3	237	107.5	275	124.7	37 1/8	943.1	40	1015.8
CSH642GKA101	1	Y	N	N	N	35	889.0	33 5/8	853.5	7/8	22.2	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	16 1/4	412.8	17 7/8	454.0	15 7/8	403.2	255	115.7	293	132.9	37 1/8	943.1	40	1015.8
CSH648GKA101	1	Y	N	N	N	35	889.0	33 5/8	853.5	7/8	22.2	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	16 1/4	412.8	18	457.2	14 7/8	377.8	260	117.9	298	135.2	37 1/8	943.1	40	1015.8
CSH660GKA101	1	Y	N	N	N	35	889.0	47 3/16	1199.0	7/8	22.2	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	1 1/8	28.2	3 13/16	97.4	17 7/8	454.0	16 1/4	412.8	19	482.6	317	143.8	363	164.7	37 1/8	943.1	52 7/16	1332.0
		208-230-1-60	208/230-3-60	460-3-60	575-3-60	Y=YES N=NO																													





UNIT SIZE	"X" MINIMUM GROUND MOUNTING PAD APPLICATION DIMENSIONS		"Y" MINIMUM ROOF-TOP MOUNTING PAD APPLICATION DIMENSIONS	
-	23 1/8	587.3	17 7/8	454.6
-	25 3/4	654.0	20 7/16	518.5
18	31 3/16	792.5	22 15/16	583.2
24,30,36,42,48,60	35	889.0	26 3/4	679.7

NOTE: ALL DIMENSIONS IN INCH (MM)

U.S. ECCN: Not Subject to Regulation (N.S.R.)

5444-4R CSH6 Dimensions REV

PHYSICAL DATA							
Model Size	**18**	**24**	**30**	**36**	**42**	**48**	**60**
Nominal Cooling Capacity (BTU/hr)	18,000	24,000	30,000	36,000	42,000	48,000	60,000
Nominal SEER	16.0	16.0	16.0	16.0	16.0	16.0	16.0
Compressor Type	Scroll						
REFRIGERANT	R–410A						
Control	TXV (R–410A Hard Shutoff)						
Charge (lb)	7.0	7.6	9.75	11.2	9.92	9.87	13.0
COND FAN	Propeller Type, Direct Drive						
Air Discharge	Vertical						
Air Qty (CFM)	2233	3223	3223	3223	3770	4046	4400
Motor HP	1/12	1/12	1/12	1/12	1/3	1/4	1/3
Motor RPM	810	810	810	810	700	810	767
COND COIL							
Face Area (Sq ft)	19.30	20.10	20.10	20.10	20.10	20.10	35.47
Fins per In.	20	20	20	20	20	20	20
Rows	1	1	2	2	2	2	2
Circuits	5	5	6	8	8	8	12
VALVE CONNECT. (In. ID)							
Vapor	5/8		3/4		7/8		7/8
Liquid	3/8						
REFRIGERANT TUBES* (In. OD)							
Vapor (0–80 Ft Tube Length)	5/8		3/4		7/8		1 1/8
Liquid (0–80 Ft Tube Length)	3/8						

*****Units are rated with 25 ft (7.6 m) of lineset length. See *Vapor Line Sizing and Cooling Capacity Loss* table when using other sizes and lengths of lineset.

Note: See unit Installation Instruction for proper installation.

ELECTRICAL DATA (208/230–1–60, voltage range 197V – 253V)												
UNIT SIZE	**V/PH**	**OPER VOLTS***		**COMPR**		**FAN**	**MCA**	**MIN WIRE SIZE † 60° C**	**MIN WIRE SIZE † 75° C**	**MAX LENGTH FT (M) †† 60° C**	**MAX LENGTH FT (M) †† 75° C**	**MAX FUSE** or CKT BRK AMPS**
		MAX	**MIN**	**LRA**	**RLA**	**FLA**						
18	208/230/1	253	197	56.3	10.5	0.5	13.6	14	14	58 (18)	55 (17)	20
24				62.9	11.9	0.6	15.5	14	14	51 (15)	48 (15)	25
30				72.5	15.4	0.6	19.9	14	14	40 (12)	38 (11)	30
36				75.0	16.8	0.6	21.6	12	12	58 (18)	55 (17)	35
42				123.9	20.0	2.8	27.8	10	10	72 (22)	68 (21)	40
48				130.0	24.4	1.3	31.8	8	10	98 (30)	60 (18)	45
60				152.5	24.9	2.8	33.9	8	10	92 (28)	50 (17)	50

***** Permissible limits of the voltage range at which the unit will operate satisfactorily

† If wire is applied at ambient greater than 30°C, consult table 310–16 of the NEC (NFPA 70). The ampacity of non–metallic–sheathed cable (NM), trade name ROMEX, shall be that of 60°C conditions, per the NEC (NFPA 70) Article 336–26. If other than uncoated (no–plated), 60 or 75°C insulation, copper wire (solid wire for 10 AWG or smaller, stranded wire for larger than 10 AWG) is used, consult applicable tables of the NEC (NFPA 70).

‡ Length shown is as measured 1 way along wire path between unit and service panel for voltage drop not to exceed 2%.

****** Time–Delay fuse.

FLA – Full Load Amps

LRA – Locked Rotor Amps

MCA – Minimum Circuit Amps

RLA – Rated Load Amps

NOTE: Control circuit is 24–V on all units and requires external power source. Copper wire must be used from service disconnect to unit.
All motors/compressors contain internal overload protection.

Complies with 2010 requirements of ASHRAE Standards 90.1

A–WEIGHTED SOUND LEVEL								
Unit Size	Standard Rating (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dB without tone adjustment)						
		125	250	500	1000	2000	4000	8000
18	67	66.2	63.9	63.8	62.3	58.4	56.4	50.3
24	71	65.0	63.7	63.4	68.5	64.7	58.7	52.8
30	70	67.1	66.3	66.6	66.9	62.9	58.1	53.0
36	71	68.2	66.4	67.5	68.4	59.6	58.2	52.4
42	68	63.0	64.2	66.3	63.5	57.1	55.4	55.8
48	71	68.4	67.7	69.7	67.6	59.4	56.4	50.0
60	69	63.7	65.4	67.3	64.9	58.3	56.2	51.9

NOTE: Tested in accordance with AHRI Standard 270–08 (not listed in AHRI).

VAPOR LINE SIZING AND COOLING CAPACITY LOSS

Acceptable vapor line diameters provide adequate oil return to the compressor while avoiding excessive capacity loss. The suction line diameters shown in the chart below are acceptable for HP systems with R–410A refrigerant:

R–410A COOLING CAPACITY LOSS FOR VARIOUS LINE LENGTHS & TUBE DIAMETERS													
Model Size	Liquid Line in.(mm)	Acceptable Vapor Line Sizes in. (mm)	Cooling Capacity Loss (%) at Total Equivalent Line Length, feet (m) Refer to Long Line Application Guideline to calculate equivalent length										
			Standard Application			Long Line Application (Requires Accessories)							
			25' (7.6)	50' (15.2)	80' (24.4)	81' (24.7)	100' (30.5)	125' (38.1)	150' (45.7)	175' (53.3)	200' (61)	225' (68.6)	250' (76.2)
18	3/8 (10)	1/2 (13)	1	2	3	3	4	6	7	8	9	10	12
		5/8 (16)	0	0	1	1	1	1	2	2	3	3	3
24		5/8 (16)	0	1	1	1	2	3	3	4	4	5	6
		3/4 (19)	0	0	0	0	0	1	1	1	1	1	2
30		5/8 (16)	1	2	3	3	3	4	5	6	7	8	9
		3/4 (19)	0	0	1	1	1	1	2	2	2	3	3
		7/8 (22)	0	0	0	0	0	1	1	1	1	1	1
36		5/8 (16)	1	2	4	4	5	6	7	9	10	11	13
		3/4 (19)	0	0	1	1	1	2	2	3	3	4	4
		7/8 (22)	0	0	0	0	0	1	1	1	1	2	2
42		3/4 (19)	0	1	2	2	2	3	4	4	5	6	6
		7/8 (22)	0	0	1	1	1	1	2	2	2	3	3
48		3/4 (19)	0	1	2	2	3	4	5	5	6	7	8
		7/8 (22)	0	0	1	1	1	2	2	2	3	3	4
60		3/4 (19)	1	2	4	4	5	6	7	9	10	11	12
		7/8 (22)	0	1	2	2	2	3	4	4	5	5	6
		1–1/8 (29)	0	0	0	0	1	1	1	1	1	1	2

* Applications are considered "Long Line" if the total equivalent tubing length exceeds 80 feet (24.4m) or there is more than 20 foot (6.1m) vertical separation between indoor and outdoor units. These applications require additional accessories and system modifications for reliable system operation.

Applications in this area may have height restrictions that limit allowable total equivalent length when outdoor unit is below indoor unit.

REFRIGERANT PIPING LENGTH LIMITATIONS

Maximum Line Lengths:

The maximum allowable total equivalent length for heat pumps varies depending on the vertical separation. See the tables below for allowable lengths depending on whether the outdoor unit is on the same level, above or below the outdoor unit.

Maximum Line Lengths for Heat Pump Applications			
	MAXIMUM ACTUAL LENGTH ft (m)	MAXIMUM EQUIVALENT LENGTH† ft (m)	MAXIMUM VERTICAL SEPARATION ft (m)
Units on equal level	200 (61)	250 (76.2)	N/A
Outdoor unit ABOVE indoor unit	200 (61)	250 (76.2)	200 (61)
Outdoor unit BELOW indoor unit	See Table *'Maximum Total Equivalent Length: Outdoor Unit BELOW Indoor Unit'*		

† **Total equivalent length accounts for losses due to elbows or fitting. See the Long Line Guideline for details.**

Maximum Total Equivalent Length{ – Outdoor Unit BELOW Indoor Unit								
Unit Size	Liquid Line Diameter w/ TXV	HP with R–410A Refrigerant – Maximum Total Equivalent Length† Vertical Separation ft (m) Outdoor unit BELOW indoor unit; 0–20 (0 – 6.1)	21–30 (6.4 – 9.1)	31–40 (9.4 – 12.2)	41–50 (12.5 – 15.2)	51–60 (15.5 – 18.3)	61–70 (18.6 – 21.3)	71–80 (21.6 – 24.4)
18 HP with R–410A	3/8	250*	250*	250*	250*	250*	250*	250*
24 HP with R–410A	3/8	250*	250*	250*	250*	250*	250*	250*
30 HP with R–410A	3/8	250*	250*	250*	250*	250*	250*	250*
36 HP with R–410A	3/8	250*	250*	250*	250*	250*	250*	250*
42 HP with R–410A	3/8	250*	250*	250*	250*	250*	250*	150
48 HP with R–410A	3/8	250*	250*	250*	250*	230	160	––
60 HP with R–410A	3/8	250*	225*	190	150	110	––	––

*** Maximum actual length not to exceed 200 ft (61 m)**

† **Total equivalent length accounts for losses due to elbows or fitting. See the Long Line Guideline for details.**

–– = **outside acceptable range**

LONG LINE APPLICATIONS

An application is considered Long Line when the refrigerant level in the system requires the use of accessories to maintain acceptable refrigerant management for systems reliability. Defining a system as long line depends on the liquid line diameter, actual length of the tubing, and vertical separation between the indoor and outdoor units.

For Heat Pump systems, the chart below shows when an application is considered Long Line. Beyond these lengths, long line accessories are required:

HP WITH R–410A REFRIGERANT LONG LINE DESCRIPTION ft (m) Beyond these lengths, long line accessories are required			
Liquid Line Size	Units On Same Level	Outdoor Below Indoor	Outdoor Above Indoor
3/8	80 (24.4)	20 (6.1) vertical or 80 (24.4) total	80 (24.4)

Note: See Long Line Guideline for details

CHARGING SUBCOOLING (TXV–TYPE EXPANSION DEVICE)	
UNIT SIZE	REQUIRED SUBCOOLING °F (°C)
18	8 (4.44)
24	7 (3.89)
30	7 (3.89)
36	10 (5.56)
42	9 (5.00)
48	9 (5.00)
60	7 (3.89)

SIZE 18 EXPANDED DATA

		018 Size Outdoor With FXM4X18**AL Indoor Cooling																							
		Outdoor Ambient Temperature - Degrees F, Dry Bulb																							
		75					85					95					105					115				
		Entering Indoor Temperature - Degrees F, Wet Bulb																							
CFM		72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57
545	MBh†	21.64	19.65	18.21	17.90	17.36	20.62	18.73	17.36	17.08	16.70	19.56	17.76	16.46	16.22	16.01	18.43	16.74	15.51	15.34	15.26	17.23	15.65	14.50	14.47	14.45
	S/T‡	0.53	0.71	0.74	0.92	1.00	0.53	0.73	0.75	0.94	1.00	0.54	0.74	0.77	0.97	1.00	0.55	0.76	0.79	0.99	1.00	0.57	0.79	0.81	1.00	1.00
	AMPS*	4.29	4.34	4.37	4.38	4.39	5.07	5.11	5.15	5.15	5.16	5.96	5.99	6.02	6.03	6.03	6.97	7.01	7.04	7.04	7.04	8.15	8.19	8.22	8.22	8.22
	HI PR	267	264	262	261	260	308	305	302	302	301	353	350	347	346	346	403	399	396	396	396	456	453	450	450	450
	LO PR	155	142	132	130	126	157	144	134	132	129	160	146	136	134	133	162	148	138	137	137	165	151	141	141	141
600	MBh†	21.94	19.95	18.50	18.24	17.92	20.90	19.00	17.62	17.40	17.22	19.80	18.00	16.70	16.56	16.49	18.65	16.95	15.72	15.72	15.70	17.41	15.83	14.69	14.87	14.85
	S/T‡	0.54	0.74	0.76	0.96	1.00	0.55	0.75	0.78	0.98	1.00	0.56	0.77	0.80	0.99	1.00	0.57	0.79	0.82	1.00	1.00	0.58	0.82	0.85	1.00	1.00
	AMPS*	4.32	4.36	4.40	4.40	4.41	5.10	5.14	5.17	5.17	5.18	5.98	6.02	6.05	6.05	6.05	7.00	7.04	7.07	7.06	7.07	8.18	8.22	8.25	8.24	8.24
	HI PR	268	265	262	262	261	309	305	303	302	302	354	350	347	347	347	403	399	397	397	397	457	453	450	451	451
	LO PR	157	144	134	132	130	160	146	136	135	133	162	148	138	137	137	164	151	140	141	140	167	153	143	145	145
675	MBh†	22.28	20.28	18.83	18.66	18.57	21.21	19.30	17.91	17.85	17.83	20.07	18.26	16.96	17.08	17.05	18.88	17.18	15.96	16.24	16.22	17.60	16.04	14.88	15.34	15.32
	S/T‡	0.55	0.77	0.79	0.99	1.00	0.56	0.79	0.81	1.00	1.00	0.58	0.81	0.83	1.00	1.00	0.59	0.83	0.86	1.00	1.00	0.61	0.86	0.89	1.00	1.00
	AMPS*	4.35	4.39	4.43	4.43	4.43	5.13	5.17	5.20	5.20	5.20	6.02	6.06	6.09	6.08	6.08	7.04	7.08	7.11	7.10	7.10	8.22	8.26	8.30	8.27	8.28
	HI PR	268	265	263	263	263	309	306	303	303	303	354	351	348	348	348	404	400	397	398	398	457	454	451	452	452
	LO PR	160	147	136	136	135	162	149	138	138	138	164	151	140	142	142	167	153	142	145	145	169	155	145	149	149

		-3			7			17			27			37			47			57			67		
675		018 Size Outdoor With FXM4X18**AL Indoor Heating																							
CFM		65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75
545	MBh†	7.22	7.13	7.03	8.94	8.77	8.68	11.02	10.89	10.66	13.20	13.04	12.88	15.53	15.34	15.15	17.98	21.26	20.92	20.52	20.27	20.02	23.13	22.77	22.51
	T/R	13.80	13.60	13.30	17.00	16.70	16.50	21.00	20.70	20.20	25.10	24.80	24.40	29.60	29.10	28.70	34.20	40.40	39.60	39.00	38.50	37.90	44.00	43.20	42.60
	AMPS*	4.66	4.87	5.11	4.88	5.10	5.36	5.05	5.30	5.61	5.21	5.47	5.75	5.41	5.68	5.97	5.62	7.14	7.49	5.84	6.14	6.45	6.04	6.37	6.69
	HI PR	266	284	304	280	298	318	291	311	335	304	324	345	320	340	361	338	453	476	358	379	401	378	400	422
	LO PR	36	36	36	48	48	48	63	63	62	78	78	78	95	95	95	113	133	133	134	134	135	158	157	158
600	MBh†	7.23	7.14	7.05	10.32	10.19	10.06	10.92	10.80	10.67	13.22	13.05	12.89	15.55	15.36	15.17	18.01	17.80	17.58	20.58	20.33	20.08	23.29	22.88	22.60
	T/R	12.50	12.30	12.20	17.90	17.60	17.30	18.90	18.60	18.40	22.90	22.50	22.20	26.90	26.50	26.10	31.10	30.70	30.20	35.50	35.00	34.50	40.20	39.40	38.80
	AMPS*	4.64	4.86	5.09	5.53	5.82	6.14	5.04	5.29	5.56	5.15	5.41	5.68	5.32	5.59	5.87	5.51	5.78	6.08	5.70	5.99	6.29	5.85	6.19	6.50
	HI PR	262	281	301	331	354	378	288	308	329	296	316	337	311	331	352	327	348	369	345	366	388	363	385	407
	LO PR	36	36	36	57	57	57	62	62	62	78	78	78	95	95	95	113	113	114	133	134	134	160	157	157
675	MBh†	7.28	7.17	7.07	8.98	8.84	8.73	10.98	10.83	10.69	13.18	13.04	12.88	15.56	15.38	15.19	18.06	17.84	17.61	20.66	20.40	20.14	23.30	23.00	22.69
	T/R	11.20	11.00	10.80	13.80	13.60	13.40	16.90	16.60	16.40	20.30	20.00	19.70	23.90	23.60	23.20	27.70	27.30	26.90	31.70	31.30	30.80	35.80	35.20	34.70
	AMPS*	4.64	4.85	5.09	4.83	5.06	5.30	4.99	5.24	5.52	5.10	5.35	5.62	5.23	5.50	5.78	5.39	5.66	5.95	5.55	5.83	6.13	5.70	6.00	6.31
	HI PR	259	277	297	270	289	309	281	301	323	290	309	330	301	321	342	316	336	357	332	352	373	348	369	390
	LO PR	36	36	36	48	48	48	62	62	62	77	78	78	94	95	95	113	113	114	133	134	134	156	156	157

See table Notes at end of section

SIZE 24 EXPANDED DATA

		024 Size Outdoor With FXM4X24**AL Indoor Cooling																							
		Outdoor Ambient Temperature - Degrees F, Dry Bulb																							
		75					85					95					105					115				
		Entering Indoor Temperature - Degrees F, Wet Bulb																							
CFM		72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57
700	MBh†	28.14	25.57	23.72	23.33	22.69	26.53	24.12	22.36	22.02	21.60	24.88	22.62	20.97	20.70	20.47	23.19	21.06	19.54	19.48	19.29	21.40	19.44	18.02	18.07	18.04
	S/T‡	0.52	0.71	0.74	0.92	1.00	0.53	0.72	0.75	0.94	1.00	0.54	0.74	0.77	0.96	1.00	0.55	0.76	0.79	0.96	1.00	0.56	0.79	0.81	1.00	1.00
	AMPS*	5.67	5.72	5.75	5.76	5.77	6.55	6.60	6.63	6.64	6.65	7.57	7.62	7.66	7.66	7.67	8.77	8.82	8.86	8.85	8.86	10.16	10.20	10.24	10.24	10.24
	HI PR	261	259	257	256	256	302	299	297	296	296	346	343	341	341	340	395	392	389	389	389	449	445	442	442	442
	LO PR	152	139	129	128	125	155	142	132	130	128	157	144	134	133	131	160	146	136	136	135	163	149	139	140	139
800	MBh†	28.65	26.07	24.19	23.91	23.64	26.99	24.55	22.79	22.58	22.47	25.29	23.00	21.35	21.30	21.27	23.52	21.39	19.85	20.04	20.01	21.68	19.72	18.31	18.71	18.69
	S/T‡	0.54	0.74	0.77	0.96	1.00	0.55	0.76	0.78	0.99	1.00	0.56	0.78	0.80	1.00	1.00	0.57	0.80	0.83	1.00	1.00	0.58	0.83	0.85	1.00	1.00
	AMPS*	5.73	5.78	5.82	5.82	5.83	6.61	6.66	6.70	6.70	6.71	7.64	7.69	7.73	7.73	7.73	8.84	8.89	8.93	8.92	8.92	10.23	10.28	10.31	10.30	10.30
	HI PR	262	259	257	257	257	302	300	297	297	297	347	344	342	342	342	396	392	390	390	390	449	446	443	444	444
	LO PR	156	142	132	131	130	158	144	134	134	133	160	147	137	137	137	163	149	139	141	140	165	152	141	145	145
900	MBh†	29.05	26.44	24.56	24.64	24.42	27.34	24.88	23.12	23.23	23.20	25.58	23.28	21.63	21.96	21.93	23.77	21.65	20.10	20.63	20.61	21.88	19.94	18.53	19.24	19.21
	S/T‡	0.56	0.78	0.80	0.96	1.00	0.57	0.79	0.82	1.00	1.00	0.58	0.82	0.84	1.00	1.00	0.59	0.84	0.86	1.00	1.00	0.61	0.87	0.89	1.00	1.00
	AMPS*	5.79	5.84	5.88	5.88	5.88	6.68	6.73	6.77	6.76	6.76	7.71	7.76	7.80	7.79	7.79	8.91	8.96	9.00	8.98	8.99	10.30	10.35	10.39	10.37	10.37
	HI PR	262	260	258	258	258	303	300	298	298	298	348	344	342	343	343	396	393	390	391	391	450	446	443	445	445
	LO PR	158	145	135	136	134	160	147	137	138	138	162	149	139	141	141	165	151	141	145	145	167	154	143	149	149

		-3			7			17			27			37			47			57			67		
		024 Size Outdoor With FXM4X24**AL Indoor Heating																							
CFM		65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75
700	MBh†	9.86	9.76	9.69	11.94	11.83	11.73	14.31	14.17	14.03	16.97	16.79	16.62	19.88	19.66	19.45	22.97	22.72	22.46	26.19	25.89	25.59	29.44	29.11	28.76
	T/R	14.70	14.50	14.40	17.70	17.50	17.30	21.10	20.90	20.60	24.90	24.60	24.30	29.10	28.70	28.40	33.50	33.10	32.60	38.10	37.60	37.00	42.60	42.10	41.50
	AMPS*	6.39	6.73	7.07	6.51	6.86	7.22	6.68	7.03	7.41	6.86	7.23	7.61	7.06	7.43	7.83	7.26	7.65	8.05	7.47	7.86	8.28	7.67	8.07	8.49
	HI PR	265	285	303	275	295	314	288	308	328	303	323	344	320	341	362	339	359	381	358	379	401	379	400	422
	LO PR	39	39	39	50	50	50	63	63	64	78	78	78	95	95	95	113	114	114	134	134	135	157	158	159
800	MBh†	9.90	9.80	9.73	11.98	11.86	11.75	14.35	14.20	14.06	17.01	16.83	16.65	19.94	19.71	19.50	23.06	22.80	22.54	26.33	26.02	25.72	29.67	29.32	28.96
	T/R	12.90	12.70	12.60	15.50	15.30	15.20	18.50	18.30	18.10	21.90	21.60	21.30	25.50	25.20	24.90	29.40	29.00	28.60	33.50	33.00	32.60	37.60	37.10	36.50
	AMPS*	6.37	6.71	7.05	6.47	6.82	7.18	6.61	6.96	7.33	6.76	7.11	7.49	6.91	7.28	7.67	7.07	7.45	7.85	7.23	7.62	8.02	7.38	7.77	8.18
	HI PR	260	280	298	269	288	308	281	300	320	294	313	334	308	328	349	324	345	366	342	362	384	360	381	402
	LO PR	39	39	39	50	50	50	63	63	64	78	78	78	95	95	95	113	113	114	134	134	135	157	158	158
900	MBh†	9.94	9.83	9.76	12.02	11.89	11.79	14.39	14.23	14.09	17.06	16.87	16.69	19.99	19.77	19.55	23.15	22.88	22.61	26.46	26.15	25.84	29.86	29.50	29.13
	T/R	11.50	11.40	11.20	13.80	13.70	13.50	16.50	16.30	16.10	19.50	19.20	19.00	22.80	22.50	22.20	26.30	25.90	25.50	29.90	29.50	29.10	33.60	33.20	32.70
	AMPS*	6.38	6.71	7.05	6.46	6.80	7.16	6.57	6.92	7.28	6.69	7.05	7.42	6.82	7.18	7.56	6.95	7.31	7.70	7.07	7.45	7.84	7.18	7.56	7.96
	HI PR	257	276	294	264	283	303	274	294	314	286	306	326	299	319	340	313	334	355	329	349	371	345	366	387
	LO PR	39	39	39	50	50	50	63	63	64	78	78	78	94	95	95	113	113	114	134	134	134	157	157	158

See table Notes at end of section

SIZE 30 EXPANDED DATA

		030 Size Outdoor With FXM4X36**AL Indoor Cooling																								
		Outdoor Ambient Temperature - Degrees F, Dry Bulb																								
		75					85					95					105					115				
		Entering Indoor Temperature - Degrees F, Wet Bulb																								
CFM		72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57
875	MBh†	34.74	31.56	29.27	28.78	27.94	33.09	30.07	27.89	27.46	26.87	31.33	28.48	26.43	26.07	25.74	29.42	26.78	24.87	24.61	24.51	27.35	24.93	23.18	23.19	23.15
	S/T‡	0.53	0.72	0.74	0.93	1.00	0.54	0.73	0.76	0.95	1.00	0.55	0.75	0.78	0.98	1.00	0.56	0.77	0.80	0.99	1.00	0.57	0.80	0.82	1.00	1.00
	AMPS*	7.76	7.75	7.75	7.75	7.75	8.62	8.62	8.62	8.62	8.62	9.58	9.59	9.59	9.59	9.59	10.67	10.68	10.69	10.69	10.69	11.93	11.94	11.94	11.94	11.94
	HI PR	259	256	254	253	253	300	297	294	294	293	344	341	338	338	337	393	389	386	386	386	446	442	439	439	439
	LO PR	154	141	131	129	126	157	143	133	132	129	159	146	135	134	133	162	148	138	137	136	165	151	140	141	141
975	MBh†	35.24	32.04	29.72	29.32	28.87	33.54	30.49	28.30	27.97	27.74	31.70	28.85	26.78	26.69	26.53	29.73	27.08	25.17	25.26	25.23	27.59	25.18	23.44	23.81	23.78
	S/T‡	0.54	0.74	0.77	0.97	1.00	0.55	0.76	0.79	0.99	1.00	0.56	0.78	0.81	0.99	1.00	0.57	0.80	0.83	1.00	1.00	0.59	0.83	0.86	1.00	1.00
	AMPS*	7.91	7.90	7.90	7.90	7.90	8.76	8.77	8.77	8.77	8.77	9.72	9.73	9.73	9.73	9.74	10.82	10.83	10.83	10.83	10.83	12.08	12.08	12.09	12.09	12.09
	HI PR	260	257	254	254	254	301	297	295	294	294	345	341	339	339	338	394	390	387	387	387	447	443	440	441	440
	LO PR	157	144	134	132	130	159	146	136	135	134	162	148	138	138	137	164	151	140	141	141	167	153	143	145	145
1075	MBh†	35.72	32.48	30.16	29.89	29.73	33.95	30.89	28.69	28.59	28.55	32.06	29.20	27.13	27.33	27.28	30.04	27.34	25.48	25.93	25.90	27.84	25.45	23.70	24.41	24.39
	S/T‡	0.56	0.77	0.80	1.00	1.00	0.57	0.79	0.81	1.00	1.00	0.58	0.81	0.84	1.00	1.00	0.59	0.84	0.86	1.00	1.00	0.61	0.87	0.89	1.00	1.00
	AMPS*	7.95	7.94	7.94	7.94	7.94	8.80	8.80	8.80	8.80	8.80	9.76	9.77	9.77	9.77	9.77	10.85	10.86	10.87	10.87	10.87	12.11	12.12	12.12	12.12	12.12
	HI PR	260	257	255	255	255	301	298	295	295	295	346	342	339	340	340	394	390	388	388	388	447	443	440	442	442
	LO PR	159	146	136	135	134	161	148	138	138	137	164	150	140	141	141	166	153	142	145	145	169	155	144	149	149

		-3			7			17			27			37			47			57			67		
		030 Size Outdoor With FXM4X36**AL Indoor Heating																							
CFM		65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75
875	MBh†	11.90	11.78	11.68	14.54	14.40	14.26	17.54	17.36	17.18	20.93	20.71	20.49	24.70	24.42	24.17	28.81	28.49	28.17	33.22	32.85	32.47	37.83	37.43	36.94
	T/R	15.00	14.90	14.70	18.10	17.90	17.60	21.50	21.20	20.90	25.20	24.90	24.60	29.30	28.90	28.60	33.70	33.20	32.80	38.30	37.80	37.20	43.00	42.40	41.80
	AMPS*	7.70	8.11	8.47	7.87	8.27	8.67	8.07	8.47	8.89	8.26	8.68	9.11	8.48	8.90	9.36	8.71	9.14	9.60	8.96	9.40	9.87	9.21	9.67	10.14
	HI PR	272	293	313	282	302	323	295	315	336	308	329	350	323	344	366	340	361	383	359	380	402	379	401	422
	LO PR	38	38	38	49	49	50	62	62	62	76	77	77	93	93	93	111	111	111	131	131	132	153	154	154
975	MBh†	11.93	11.81	11.70	14.56	14.42	14.28	17.56	17.38	17.20	20.95	20.72	20.50	24.74	24.46	24.18	28.88	28.55	28.22	33.33	32.95	32.57	38.07	37.62	37.28
	T/R	13.50	13.40	13.20	16.20	16.10	15.90	19.30	19.00	18.80	22.70	22.40	22.10	26.30	26.00	25.60	30.30	29.90	29.50	34.50	34.00	33.50	38.80	38.30	37.80
	AMPS*	7.68	8.07	8.43	7.83	8.22	8.63	7.98	8.42	8.81	8.16	8.56	9.00	8.34	8.76	9.20	8.53	8.96	9.41	8.73	9.17	9.63	8.94	9.37	9.86
	HI PR	267	288	307	277	297	318	287	309	329	300	320	341	313	334	355	328	349	371	345	366	388	362	383	407
	LO PR	38	38	38	49	49	50	62	62	62	76	77	77	93	93	93	111	111	111	131	131	132	154	154	155
1075	MBh†	11.96	11.77	11.73	14.59	14.44	14.30	17.59	17.40	17.22	20.98	20.74	20.51	24.77	24.49	24.21	28.94	28.60	28.27	33.44	33.05	32.66	38.33	37.93	37.35
	T/R	12.30	12.10	12.00	14.80	14.60	14.40	17.50	17.30	17.10	20.60	20.30	20.00	23.90	23.60	23.30	27.50	27.20	26.80	31.40	30.90	30.50	35.40	35.00	34.40
	AMPS*	7.66	8.14	8.43	7.81	8.20	8.61	7.95	8.35	8.77	8.09	8.49	8.92	8.24	8.66	9.09	8.40	8.82	9.27	8.57	9.00	9.45	8.75	9.19	9.65
	HI PR	264	288	304	272	292	313	282	302	323	293	313	334	305	326	347	319	339	361	333	354	376	350	371	393
	LO PR	38	38	38	49	49	50	62	62	62	76	77	77	93	93	93	110	111	111	130	131	131	153	154	154

See table Notes at end of section

SIZE 36 EXPANDED DATA

		036 Size Outdoor With FXM4X48**AL Indoor Cooling																								
		Outdoor Ambient Temperature - Degrees F, Dry Bulb																								
		75					85					95					105					115				
		Entering Indoor Temperature - Degrees F, Wet Bulb																								
CFM		72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57
1050	MBh†	42.58	38.21	35.13	34.44	33.22	40.39	36.25	33.34	32.73	31.88	38.17	34.27	31.53	31.00	30.52	35.86	32.22	29.66	29.26	29.08	33.42	30.04	27.68	27.57	27.53
	S/T‡	0.53	0.72	0.75	0.94	1.00	0.54	0.74	0.77	0.97	1.00	0.55	0.76	0.79	0.99	1.00	0.56	0.78	0.81	1.02	1.00	0.57	0.80	0.83	1.00	1.00
	AMPS*	9.43	9.24	9.12	9.10	9.06	10.57	10.38	10.26	10.24	10.21	11.74	11.54	11.43	11.41	11.39	13.02	12.83	12.71	12.70	12.69	14.49	14.30	14.20	14.20	14.19
	HI PR	275	270	266	266	264	317	311	307	306	305	362	356	352	351	350	411	405	401	400	400	465	459	454	454	454
	LO PR	153	140	131	129	125	155	143	133	131	128	158	145	135	134	132	161	147	137	136	136	164	150	140	140	140
1200	MBh†	43.63	39.14	36.00	35.41	34.81	41.32	37.08	34.11	33.64	33.36	38.97	35.00	32.21	31.94	31.88	36.54	32.84	30.25	30.38	30.33	33.99	30.58	28.18	28.69	28.66
	S/T‡	0.55	0.76	0.78	0.99	1.00	0.56	0.77	0.80	1.01	1.00	0.57	0.80	0.82	1.00	1.00	0.58	0.82	0.85	1.00	1.00	0.60	0.85	0.88	1.00	1.00
	AMPS*	9.61	9.41	9.28	9.26	9.24	10.75	10.54	10.41	10.40	10.39	11.91	11.71	11.58	11.57	11.57	13.19	12.98	12.86	12.87	12.87	14.65	14.46	14.34	14.37	14.37
	HI PR	277	271	268	267	266	318	312	308	308	307	363	357	353	353	353	413	406	402	402	402	466	460	455	456	456
	LO PR	156	143	134	132	130	159	146	136	135	134	161	148	138	137	137	164	150	140	141	141	167	153	143	145	145
1350	MBh†	44.45	39.88	36.68	36.31	36.17	42.03	37.73	34.71	34.67	34.61	39.59	35.56	32.75	33.09	33.04	37.06	33.34	30.72	31.42	31.38	34.41	30.98	28.58	29.63	29.59
	S/T‡	0.57	0.79	0.82	0.99	1.00	0.58	0.81	0.84	1.00	1.00	0.59	0.83	0.86	1.00	1.00	0.60	0.86	0.89	1.00	1.00	0.62	0.89	0.92	1.00	1.00
	AMPS*	9.78	9.56	9.43	9.42	9.41	10.91	10.69	10.56	10.57	10.56	12.07	11.86	11.73	11.75	11.74	13.35	13.14	13.01	13.04	13.04	14.81	14.61	14.49	14.54	14.54
	HI PR	278	272	269	268	268	319	313	309	309	309	364	358	354	355	355	414	407	403	404	404	467	461	456	458	458
	LO PR	159	146	136	135	135	161	148	138	138	138	164	150	140	142	142	166	153	142	146	145	169	155	145	150	150

		-3			7			17			27			37			47			57			67		
		036 Size Outdoor With FXM4X48**AL Indoor Heating																							
CFM		65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75
1050	MBh†	12.02	11.39	10.74	16.26	15.69	15.11	20.98	20.56	19.47	25.06	24.66	24.28	29.70	29.23	28.76	35.13	34.55	33.99	41.72	40.96	40.52	49.55	48.73	47.92
	T/R	11.50	10.90	10.20	15.50	14.90	14.30	19.80	19.40	18.30	23.60	23.20	22.70	27.80	27.30	26.80	32.70	32.10	31.50	38.60	37.80	37.30	45.60	44.80	43.90
	AMPS*	8.10	8.47	8.84	8.63	9.03	9.43	9.13	9.57	9.93	9.48	9.95	10.43	9.89	10.37	10.86	10.42	10.90	11.40	11.17	11.65	12.21	12.00	12.50	13.03
	HI PR	229	244	259	245	261	277	263	280	295	279	297	316	297	316	335	320	339	359	349	368	389	382	401	421
	LO PR	39	39	39	50	50	50	62	62	63	76	76	77	92	92	93	109	110	110	128	129	130	149	150	151
1200	MBh†	12.24	11.59	10.95	16.51	15.94	15.35	21.20	20.80	19.83	25.34	24.92	24.51	30.05	29.56	29.09	35.66	35.00	34.42	42.37	41.59	41.14	50.02	49.25	48.46
	T/R	10.20	9.70	9.10	13.70	13.20	12.70	17.50	17.20	16.30	20.90	20.50	20.10	24.60	24.20	23.70	29.00	28.40	27.90	34.30	33.60	33.20	40.30	39.60	38.90
	AMPS*	8.14	8.51	8.89	8.63	9.03	9.44	9.08	9.52	9.90	9.39	9.86	10.34	9.75	10.23	10.72	10.24	10.72	11.21	10.85	11.37	11.92	11.70	12.19	12.71
	HI PR	226	241	257	240	256	273	257	274	289	271	288	307	287	306	325	309	327	347	332	352	374	365	385	404
	LO PR	39	39	39	50	50	50	62	62	63	76	76	77	92	92	93	109	109	110	128	129	129	148	149	150
1350	MBh†	12.42	11.78	11.12	16.74	16.15	15.56	21.41	21.01	20.57	25.57	25.14	24.73	30.35	29.85	29.36	35.96	35.36	34.77	42.75	42.06	41.32	50.20	49.49	48.74
	T/R	9.20	8.70	8.20	12.40	11.90	11.50	15.80	15.40	15.10	18.70	18.40	18.00	22.10	21.70	21.30	26.00	25.50	25.10	30.80	30.20	29.60	36.00	35.40	34.80
	AMPS*	8.19	8.57	8.95	8.65	9.06	9.47	9.06	9.51	9.97	9.33	9.81	10.29	9.66	10.15	10.63	10.12	10.60	11.09	10.68	11.17	11.69	11.50	11.99	12.50
	HI PR	224	239	254	237	253	269	251	269	287	264	282	301	280	298	317	300	318	337	321	340	360	353	372	392
	LO PR	39	39	39	49	50	50	62	62	62	76	76	77	92	92	92	109	109	110	128	128	129	147	148	149

See table Notes at end of section

SIZE 42 EXPANDED DATA

		042 Size Outdoor With FXM4X48**AL Indoor Cooling																							
		Outdoor Ambient Temperature - Degrees F, Dry Bulb																							
		75					85					95					105					115				
		Entering Indoor Temperature - Degrees F, Wet Bulb																							
CFM		72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57
1240	MBh†	49.04	44.71	41.58	40.84	39.45	46.75	42.65	39.68	39.03	38.01	44.33	40.50	37.68	37.11	36.47	41.74	38.18	35.55	35.08	34.78	38.94	35.65	33.23	32.97	32.92
	S/T‡	0.52	0.70	0.73	0.91	1.00	0.53	0.72	0.74	0.93	1.00	0.54	0.73	0.76	0.95	1.00	0.55	0.75	0.78	0.98	1.00	0.56	0.78	0.80	1.00	1.00
	AMPS*	10.71	10.64	10.59	10.58	10.56	12.06	12.00	11.95	11.94	11.92	13.62	13.55	13.50	13.49	13.48	15.39	15.32	15.27	15.26	15.26	17.41	17.36	17.31	17.31	17.30
	HI PR	274	269	266	266	264	315	311	307	307	306	361	356	352	352	351	411	406	402	401	401	464	459	455	455	455
	LO PR	154	140	130	128	124	156	142	132	130	127	159	145	134	133	131	162	147	137	135	134	164	150	139	139	139
1400	MBh†	49.88	45.53	42.37	41.74	40.98	47.51	43.38	40.40	39.86	39.43	44.97	41.14	38.32	37.93	37.77	42.28	38.72	36.09	36.02	35.97	39.38	36.12	33.70	34.04	33.99
	S/T‡	0.54	0.73	0.76	0.95	1.00	0.54	0.75	0.77	0.97	1.00	0.55	0.77	0.79	0.99	1.00	0.57	0.79	0.81	1.00	1.00	0.58	0.82	0.84	1.00	1.00
	AMPS*	10.83	10.76	10.71	10.70	10.69	12.19	12.12	12.08	12.07	12.06	13.75	13.68	13.63	13.62	13.62	15.52	15.45	15.40	15.40	15.40	17.54	17.48	17.44	17.45	17.45
	HI PR	274	270	267	267	266	316	312	308	308	307	362	357	353	353	353	411	407	403	403	403	465	460	456	457	457
	LO PR	157	143	133	132	129	159	145	135	134	132	162	148	137	136	136	164	150	139	140	139	167	153	142	144	144
1575	MBh†	50.60	46.20	43.05	42.62	42.38	48.12	44.00	41.00	40.79	40.73	45.50	41.65	38.85	39.03	38.98	42.72	39.18	36.57	37.11	37.06	39.73	36.50	34.10	35.00	34.96
	S/T‡	0.55	0.77	0.79	0.99	1.00	0.56	0.78	0.81	1.00	1.00	0.57	0.80	0.83	1.00	1.00	0.59	0.83	0.85	1.00	1.00	0.61	0.86	0.88	1.00	1.00
	AMPS*	10.97	10.90	10.85	10.84	10.84	12.33	12.26	12.21	12.21	12.21	13.89	13.81	13.76	13.77	13.77	15.66	15.59	15.54	15.55	15.55	17.68	17.62	17.58	17.60	17.60
	HI PR	275	271	268	268	268	317	313	309	309	309	363	358	354	355	355	412	407	404	404	404	466	461	457	459	459
	LO PR	160	146	136	135	134	162	148	137	137	137	164	150	139	141	141	167	153	142	144	144	169	155	144	149	148

		-3			7			17			27			37			47			57			67		
		042 Size Outdoor With FXM4X48**AL Indoor Heating																							
CFM		65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75
1240	MBh†	17.06	16.95	16.67	21.26	20.99	20.55	25.65	25.40	25.15	30.43	30.14	29.84	35.69	35.29	34.92	41.43	41.00	40.36	47.26	46.69	46.14	53.52	52.84	52.31
	T/R	15.00	14.90	14.60	18.50	18.20	17.80	22.10	21.80	21.50	25.90	25.60	25.30	30.00	29.60	29.20	34.40	34.00	33.40	38.90	38.30	37.80	43.50	42.90	42.30
	AMPS*	9.97	10.49	11.00	10.54	11.08	11.60	10.91	11.47	12.07	11.45	12.03	12.65	12.02	12.63	13.30	12.63	13.26	13.93	13.29	13.94	14.63	13.98	14.65	15.38
	HI PR	261	281	299	276	295	313	284	303	324	298	318	338	314	334	356	332	352	373	351	371	392	371	391	414
	LO PR	36	37	37	48	48	48	61	61	61	75	75	75	90	90	90	108	109	108	127	128	128	151	151	151
1400	MBh†	17.13	17.03	16.73	21.31	20.84	20.60	25.67	25.43	25.18	30.46	30.17	29.87	35.80	35.34	34.96	41.54	40.87	40.44	47.45	46.88	46.32	53.86	53.33	52.63
	T/R	13.40	13.30	13.00	16.40	16.00	15.80	19.60	19.30	19.10	23.00	22.70	22.40	26.70	26.30	25.90	30.60	30.00	29.70	34.60	34.10	33.60	38.80	38.30	37.70
	AMPS*	9.96	10.47	10.98	10.46	10.98	11.54	10.81	11.36	11.97	11.29	11.87	12.47	11.80	12.40	13.03	12.34	12.96	13.61	12.93	13.56	14.23	13.54	14.22	14.91
	HI PR	257	276	295	269	288	307	276	296	316	289	309	329	303	323	344	318	338	359	335	355	377	353	374	396
	LO PR	36	37	37	48	47	48	61	61	61	74	75	75	90	90	91	108	108	108	127	128	128	150	151	151
1575	MBh†	17.21	17.12	16.81	21.38	20.90	20.66	25.71	25.47	25.21	30.51	30.21	29.91	35.91	35.39	35.01	41.66	40.97	40.54	47.65	47.07	46.50	54.19	53.65	52.94
	T/R	11.90	11.90	11.60	14.70	14.30	14.10	17.40	17.20	17.00	20.40	20.20	19.90	23.80	23.40	23.10	27.30	26.80	26.40	30.80	30.40	30.00	34.70	34.30	33.70
	AMPS*	9.97	10.49	10.99	10.40	10.95	11.51	10.74	11.30	11.92	11.18	11.75	12.35	11.63	12.23	12.85	12.12	12.73	13.37	12.65	13.27	13.93	13.20	13.87	14.54
	HI PR	253	272	291	263	282	302	270	289	311	281	301	321	294	313	334	307	327	348	322	342	363	338	359	380
	LO PR	36	37	37	48	47	48	61	61	61	74	75	75	91	90	90	108	107	108	127	127	128	150	150	151

See table Notes at end of section

SIZE 48 EXPANDED DATA

		048 Size Outdoor With FXM4X60**AL Indoor Cooling																								
		Outdoor Ambient Temperature - Degrees F, Dry Bulb																								
		75					85					95					105					115				
		Entering Indoor Temperature - Degrees F, Wet Bulb																								
CFM		72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57
1420	MBh†	58.07	53.00	49.29	48.39	46.84	55.36	50.57	47.05	46.26	45.13	52.51	48.00	44.69	43.97	43.29	49.43	45.23	42.13	41.55	41.27	46.11	42.21	39.35	39.34	39.04
	S/T‡	0.50	0.68	0.71	0.88	1.00	0.54	0.73	0.76	0.95	1.00	0.58	0.79	0.81	1.03	1.00	0.62	0.85	0.88	1.10	1.00	0.66	0.92	0.95	1.15	1.00
	AMPS*	12.17	12.12	12.08	12.08	12.06	14.00	13.94	13.89	13.88	13.87	16.12	16.05	16.00	15.99	15.98	18.58	18.51	18.45	18.44	18.43	21.42	21.34	21.28	21.28	21.27
	HI PR	277	273	270	269	267	320	315	311	310	309	366	361	357	356	355	416	411	406	406	405	470	465	461	461	460
	LO PR	155	141	131	129	125	157	143	133	131	128	160	146	135	133	131	162	148	137	136	135	165	151	140	140	139
1600	MBh†	59.07	53.94	50.21	49.44	48.62	56.23	51.41	47.88	47.22	46.78	53.24	48.73	45.42	45.37	44.83	50.06	45.85	42.77	42.73	42.67	46.62	42.74	39.90	40.34	40.29
	S/T‡	0.52	0.71	0.73	0.92	1.00	0.55	0.76	0.79	0.99	1.00	0.59	0.82	0.85	1.03	1.00	0.64	0.89	0.92	1.00	1.00	0.69	0.97	0.99	1.00	1.00
	AMPS*	12.31	12.26	12.22	12.21	12.20	14.14	14.08	14.04	14.03	14.02	16.27	16.20	16.15	16.15	16.14	18.74	18.67	18.61	18.61	18.61	21.57	21.51	21.44	21.45	21.45
	HI PR	278	274	270	270	269	321	316	312	311	311	367	362	358	358	357	417	412	407	408	407	471	466	462	462	462
	LO PR	158	144	134	132	130	160	146	136	134	133	163	148	138	138	136	165	151	140	140	140	168	153	142	145	144
1800	MBh†	59.90	54.77	51.02	50.90	50.29	56.96	52.13	48.60	48.40	48.34	53.86	49.35	46.06	46.31	46.25	50.55	46.39	43.32	44.01	43.96	47.05	43.18	40.36	41.48	41.43
	S/T‡	0.53	0.74	0.76	0.93	1.00	0.57	0.80	0.82	1.00	1.00	0.62	0.86	0.89	1.00	1.00	0.66	0.94	0.96	1.00	1.00	0.71	1.02	1.04	1.00	1.00
	AMPS*	12.47	12.41	12.37	12.37	12.37	14.30	14.24	14.19	14.19	14.19	16.44	16.37	16.32	16.33	16.32	18.91	18.84	18.78	18.79	18.79	21.74	21.68	21.62	21.65	21.65
	HI PR	279	275	271	271	271	321	317	313	313	313	368	363	359	359	359	418	413	408	409	409	472	467	463	464	464
	LO PR	161	147	136	137	135	163	149	138	138	138	165	151	140	142	141	168	153	142	145	145	170	156	145	149	149

		-3			7			17			27			37			47			57			67		
		048 Size Outdoor With FXM4X60**AL Indoor Heating																							
CFM		65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75
1420	MBh†	20.76	20.52	20.29	25.15	24.93	24.72	29.87	29.60	29.34	35.07	34.74	34.42	40.98	40.32	39.98	46.78	46.50	46.00	53.42	52.76	52.12	60.31	59.42	58.62
	T/R	15.40	15.20	15.00	18.50	18.30	18.10	21.80	21.50	21.30	25.40	25.10	24.80	29.40	28.90	28.60	33.30	33.00	32.60	37.70	37.20	36.60	42.30	41.50	40.90
	AMPS*	12.23	12.81	13.42	12.65	13.26	13.91	13.13	13.76	14.44	13.63	14.29	14.99	14.15	14.84	15.57	14.69	15.43	16.18	15.32	16.05	16.82	15.95	16.69	17.48
	HI PR	250	268	287	259	278	297	271	290	310	285	304	324	300	320	340	316	337	357	335	355	376	355	374	395
	LO PR	36	36	36	47	47	48	59	60	60	73	73	74	89	89	89	106	107	107	125	126	126	148	149	149
1600	MBh†	20.83	20.58	20.35	25.20	24.98	24.76	29.90	29.64	29.38	35.27	34.79	34.46	40.86	40.60	40.05	47.27	46.40	45.96	53.63	53.01	52.36	60.65	59.87	59.04
	T/R	13.70	13.50	13.30	16.40	16.30	16.10	19.40	19.10	18.90	22.60	22.30	22.00	26.00	25.80	25.40	29.90	29.20	28.90	33.60	33.10	32.70	37.70	37.10	36.50
	AMPS*	12.22	12.80	13.41	12.59	13.20	13.84	13.02	13.65	14.32	13.46	14.12	14.81	13.91	14.60	15.32	14.41	15.11	15.85	14.93	15.65	16.41	15.48	16.22	16.98
	HI PR	246	264	282	254	272	291	264	283	302	277	295	315	290	309	329	305	324	344	321	341	361	338	358	379
	LO PR	36	36	36	47	47	48	59	60	60	74	73	73	89	89	89	107	106	106	125	126	126	148	148	149
1800	MBh†	20.91	20.66	20.43	25.26	25.04	24.82	29.96	29.69	29.43	35.30	34.84	34.51	40.88	40.67	40.25	47.07	46.55	46.31	53.95	53.27	52.60	61.12	60.29	59.45
	T/R	12.20	12.10	11.90	14.70	14.50	14.30	17.20	17.00	16.90	20.10	19.80	19.60	23.10	23.00	22.70	26.40	26.10	25.90	30.10	29.60	29.20	33.80	33.30	32.70
	AMPS*	12.24	12.82	13.42	12.58	13.18	13.82	12.97	13.59	14.25	13.36	14.01	14.69	13.77	14.43	15.14	14.19	14.88	15.60	14.65	15.36	16.10	15.13	15.85	16.60
	HI PR	242	260	278	249	267	286	258	277	296	269	288	307	281	300	320	294	313	334	309	328	348	324	344	364
	LO PR	36	36	36	47	47	47	59	59	60	73	73	73	88	89	90	105	105	107	125	125	126	148	148	149

See table Notes at end of section

SIZE 60 EXPANDED DATA

		060 Size Outdoor With FXM4X60**AL Indoor Cooling																							
		Outdoor Ambient Temperature - Degrees F, Dry Bulb																							
		75					85					95					105					115				
		Entering Indoor Temperature - Degrees F, Wet Bulb																							
CFM		72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57	72	67	63††	62	57
1600	MBh†	67.41	61.41	57.06	56.01	54.03	63.92	58.31	54.24	53.30	51.89	60.21	55.00	51.22	50.38	49.54	56.21	51.44	47.58	47.07	46.96	51.85	47.09	44.36	44.15	44.10
	S/T‡	0.52	0.70	0.72	0.90	1.00	0.52	0.71	0.74	0.93	1.00	0.53	0.73	0.75	0.95	1.00	0.55	0.75	0.78	0.98	1.00	0.56	0.79	0.81	1.00	1.00
	AMPS*	14.08	14.02	13.97	13.96	13.93	16.12	16.05	16.00	15.99	15.97	18.46	18.39	18.34	18.33	18.32	21.15	21.09	21.01	21.01	21.02	24.25	24.15	24.14	24.14	24.14
	HI PR	282	277	273	272	271	323	318	314	313	312	368	363	359	358	357	417	412	407	406	406	470	464	460	460	460
	LO PR	154	140	130	128	123	156	143	132	130	127	159	145	135	133	131	162	148	137	136	135	165	151	140	140	140
1750	MBh†	68.27	62.25	57.89	56.91	55.57	64.69	59.04	54.95	54.11	53.30	60.82	55.63	51.83	51.17	50.83	56.74	51.94	48.43	48.17	48.05	52.25	47.24	44.79	45.13	45.10
	S/T‡	0.53	0.72	0.74	0.93	1.00	0.53	0.73	0.76	0.96	1.00	0.55	0.75	0.78	0.98	1.00	0.56	0.78	0.80	1.00	1.00	0.58	0.82	0.83	1.00	1.00
	AMPS*	14.23	14.17	14.12	14.11	14.09	16.27	16.21	16.15	16.14	16.13	18.61	18.55	18.50	18.49	18.49	21.31	21.25	21.20	21.20	21.19	24.41	24.29	24.31	24.31	24.32
	HI PR	283	278	274	273	272	324	319	315	314	314	369	364	360	359	359	418	412	408	408	408	470	464	461	462	462
	LO PR	156	142	132	130	127	159	145	134	133	131	161	147	137	135	135	164	150	139	139	139	167	153	142	144	144
2000	MBh†	69.42	63.34	58.94	58.21	57.76	65.65	59.99	55.88	55.41	55.32	61.66	56.42	52.62	52.72	52.66	57.41	52.60	49.13	49.80	49.72	52.76	48.44	45.33	46.54	46.48
	S/T‡	0.54	0.75	0.78	0.98	1.00	0.55	0.77	0.79	1.00	1.00	0.57	0.80	0.82	1.00	1.00	0.58	0.82	0.85	1.00	1.00	0.60	0.86	0.88	1.00	1.00
	AMPS*	14.48	14.42	14.36	14.36	14.35	16.52	16.46	16.41	16.40	16.40	18.87	18.81	18.76	18.76	18.76	21.58	21.52	21.47	21.48	21.48	24.67	24.63	24.59	24.61	24.61
	HI PR	284	279	275	275	274	326	320	316	316	316	370	365	361	361	361	419	414	409	410	410	471	466	462	464	464
	LO PR	159	146	135	134	133	162	148	137	137	136	164	150	139	140	140	167	153	142	145	144	170	156	145	149	149

		-3			7			17			27			37			47			57			67		
		060 Size Outdoor With FXM4X60**AL Indoor Heating																							
CFM		65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75	65	70	75
1600	MBh†	22.25	21.64	20.96	28.49	27.97	26.57	34.05	33.60	33.14	40.36	39.81	39.27	47.55	46.86	46.21	55.86	55.00	54.16	65.60	64.59	63.56	76.29	75.28	74.40
	T/R	14.40	14.00	13.50	18.40	18.00	17.00	21.90	21.50	21.20	25.80	25.40	25.00	30.40	29.90	29.40	35.50	34.90	34.30	41.60	40.90	40.10	48.20	47.50	46.80
	AMPS*	13.11	13.72	14.34	13.93	14.58	15.13	14.63	15.33	16.08	15.44	16.17	16.95	16.39	17.15	17.95	17.56	18.34	19.19	19.07	19.92	20.79	20.53	21.56	22.77
	HI PR	240	256	272	256	273	288	271	289	308	288	307	326	310	329	348	337	356	376	372	392	412	404	427	454
	LO PR	39	39	40	50	50	51	62	63	63	76	76	77	92	92	92	109	109	110	129	129	130	151	152	152
1750	MBh†	22.47	21.85	21.17	28.69	28.24	26.82	34.27	33.81	33.38	40.64	40.09	39.55	47.93	47.23	46.56	56.31	55.47	54.62	66.14	65.15	64.13	77.38	75.93	74.88
	T/R	13.30	12.90	12.50	16.90	16.60	15.70	20.10	19.80	19.50	23.80	23.40	23.00	28.00	27.50	27.10	32.80	32.20	31.60	38.40	37.70	37.00	44.70	43.80	43.10
	AMPS*	13.14	13.75	14.37	13.91	14.57	15.12	14.57	15.27	16.01	15.34	16.06	16.83	16.24	16.99	17.78	17.36	18.13	18.96	18.83	19.67	20.53	20.45	21.19	22.21
	HI PR	237	253	270	252	270	284	266	284	303	282	301	320	302	321	341	328	347	367	363	382	402	400	416	438
	LO PR	39	39	40	50	50	50	62	62	63	76	76	77	91	92	92	109	109	110	129	129	130	151	152	152
2000	MBh†	22.78	22.16	21.49	28.96	28.55	27.21	34.61	34.16	33.69	41.22	40.50	39.95	48.45	47.75	47.05	56.96	56.10	55.25	66.88	65.86	64.85	77.72	76.69	75.64
	T/R	11.80	11.40	11.10	14.90	14.70	14.00	17.80	17.50	17.20	21.10	20.70	20.40	24.70	24.30	23.90	29.00	28.50	28.00	33.90	33.30	32.80	39.30	38.70	38.10
	AMPS*	13.23	13.83	14.46	13.93	14.59	15.16	14.55	15.24	15.97	15.27	15.97	16.73	16.10	16.84	17.62	17.18	17.94	18.74	18.65	19.46	20.31	20.10	20.95	21.86
	HI PR	233	249	266	246	264	279	259	277	295	274	292	311	293	311	331	318	336	356	351	371	391	386	405	425
	LO PR	39	39	39	50	50	50	62	62	63	76	76	77	91	92	92	109	109	109	128	129	129	150	151	152

See table Notes at end of section

† Total capacities are net (I.D blower heat added for heating, subtracted for cooling) system capacities based on 25' line set.
If additional tubing length and/or indoor unit is located above outdoor unit, a slight variation in capacity may occur.

* System amps are total of indoor and outdoor amps

‡ S/T are based on 80 F db entering air at the indoor coil. For sensible capacities at other than 80 F db, deduct 835 Btuh per 1000 cfm of indoor coil air from MBhxS/T for each degree below 80 F, or add 835 Btuh per 1000 cfm of indoor coil air from MBhxS/T for each degree above 80 F

†† At TVA rating indoor condition (75 F db/ 63 F wb), All other indoor air temperatures are at 80 F db

T/R - Temp Rise is based on 25 foot line set
If additional tubing length and/or indoor unit is located above indoor unit, a slight variation in Temp Rise may occur

COOLING & HEATING PERFORMANCE FOR COMBINATION RATINGS

For complete ratings information, use the AHRI website directory search: www.AHRIdirectory.org. New ratings may be listed online before Specification Sheets are updated.

Outdoor Model	Indoor Model *Tested Combo	Factory Installed	Cooling 95°F (35°C) Capacity BTU/hr	SEER Stand-ard	EER	Heat 47°F (8.3°C) BTU/hr	COP	Heat 17°F (-8.3°C) BTU/hr	COP	HSPF
CSH618GKA101	FXM4X18**AL	TXV	18000	16	13	17800	3.92	10800	2.60	8.5
CSH624GKA101	FXM4X24**AL	TXV	23000	16	13	22800	3.90	14200	2.60	8.5
CSH630GKA101	FXM4X36**AL	TXV	29200	16	13	28600	3.72	17400	2.56	9.0
CSH636GKA101	FXM4X48**AL	TXV	35000	16	13	35000	4.16	20800	2.86	8.5
CSH642GKA101	FXM4X48**AL	TXV	40500	16	13	41000	3.94	25400	2.82	8.5
CSH648GKA101	FXM4X60**AL	TXV	48000	16	13	46500	3.84	29600	2.74	9.0
CSH660GKA101	FXM4X60**AL	TVX	55000	16	13	55000	3.82	33600	2.82	8.5

2015 ENERGY STAR compliance for combinations with all three: SEER 15.00 or higher and EER 12.50 or higher and HSPF 8.5 or higher.

* AHRI= Air Conditioning, Heating& Refrigeration Institute

Ratings are net values reflecting the effects of circulating fan heat. Supplemental electric heat is not included.

Ratings are based on:

Cooling Standard: 80°F(27°C) db 67°F(19°C) wb indoor entering air temperature and 95°F(35°C) db air entering outdoor unit.

High---Temp Heating Standard: 70°F(21°C) db indoor entering air temperature and 47°F(8°C) db 43°F(6°C) wb air entering outdoor unit.

Low---Temp Heating Standard: 70°F(21°C) db indoor entering air temperature and 17°F(-8°C) db 15° F(-9°C) wb air entering outdoor unit.

COP — Coefficient of Performance

EER — Energy Efficiency Ratio

HSPF — Heating Seasonal Performance Factor

SEER — Seasonal Energy Efficiency Ratio

ACCESSORY USAGE GUIDELINES

Accessory	REQUIRED FOR LOW–AMBIENT COOLING APPLICATIONS (Below 55°F / 12.8°C)	REQUIRED FOR LONG LINE APPLICATIONS*	REQUIRED FOR SEA COAST APPLICATIONS (Within 2 miles / 3.22 km)
Accumulator	Standard	Standard	Standard
Compressor Start Assist Capacitor and Relay	Yes	Yes	No
Crankcase Heater	Yes	Yes	No
Evaporator Freeze Thermostat	Yes	No	No
Isolation Relay	Yes	No	No
Liquid Line Solenoid Valve	No	See Long–Line Application Guideline	No
Low Ambient Switch	Yes‡	No	No
Support Feet	Recommended	No	Recommended

***** For tubing line sets between 80 and 200 ft. (24.38 and 60.96 m) and/or 20 ft. (6.09 m) vertical differential, refer to Residential Piping and Longline Guideline.

‡ In units equipped with ECM OD motor, motor needs to be replaced per unit accessory guide to work properly. This motor kit comes with a new defrost board that also needs to be installed. Unit will not meet AHRI rated efficiency once motor and defrost board are replaced to use this accessory.

ACCESSORIES

Part Number	Description	Used On Size
NASA00101IK	ISLN Relay Kit	ALL
NASA00601CH	Crankcase Heater for Scroll Compressor (208/230 V)	18, 24, 30
NASA00501CH	Crankcase Heater for Scroll Compressor (208/230 V)	42, 48
NASA001SC	Start Component – PTC Device	ALL
NASA00201FS	Evaporator Freeze Thermostat	ALL
NASA001LS	Liquid Line Solenoid Valve Kit, HP, R–22 or R–410A	ALL
NASA001TD	Time Delay Relay, Indoor Blower	ALL
NASA001AC	Anti–Cycle Timer (5 minute delay)	ALL
NASA003SC	Hard Start Kit (Capacitor & Relay)	36, 60
NASA007SC	Hard Start Kit (Capacitor & Relay)	18, 24, 30, 42, 48
NASA00201PM*****	PSC Fan Motor Kit (motor, fan, and defrost board)	42, 60
NASA401LA	Low Ambient Kit (Pressure Switch), R–410A	ALL
NASA00201SF	Support Feet, 4” (102mm) tall, 5 included	ALL
NAEA40501TX	TXV Kit, R–410A – for use with copper or tin fan coils	18, 24, 30
NAEA40601TX	TXV Kit, R–410A – for use with copper or tin fan coils	36, 42
NAEA40701TX	TXV Kit, R–410A – for use with copper or tin fan coils	48, 60
NAEB40501TX	TXV Kit, R–410A – for use with aluminum fan coils	18, 24, 30
NAEB40601TX	TXV Kit, R–410A – for use with aluminum fan coils	36, 42
NAEB40701TX	TXV Kit, R–410A – for use with aluminum fan coils	48, 60
NASA00106SS	Snow Stand Kit	ALL
TSTAT0201CW	Observer® Self Configuring Communicating Wall Control	ALL

***** Required to use NASA401LA Low Ambient Kit with this unit. Unit will not meet AHRI rated efficiency once this accessory is installed.

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