### **AIR CONDITIONER**



# HS29 SPLIT SYSTEMS

Bulletin No. 210472 July 2006 Supersedes Bulletin No. 210304 October 2004



3 to 5 Tons Cooling Capacity - 33,400 to 62,500 Btuh

# HS 29 - 036 - 3 Y Unit Type HS = High Side Air Conditioner Series Nominal Cooling Capacity 036 = 3 tons 042 = 3.5 tons 048 = 4 tons 060 = 5 tons 062 = 5+ tons

### **FEATURES**

### **CONTENTS**

ARI Rating Tables Pages	s 7-10
Dimensions	age 6
Features Page	es 2-4
Installation Clearances	age 6
Model Number Identification Pa	age 1
Optional Accessories Pr	age 5
Outdoor Sound Data	age 4
Specifications	age 5

### **WARRANTY**

Compressor - five year limited warranty.

All other covered components - one year limited warranty.

Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.

### **APPROVALS**

Certified in accordance with the USE certification program, which is based on ARI Standard 210/240-2005. Sound rated in Lennox reverberant sound test room in accordance with test conditions included in ARI Standard 270-95.

Tested in the Lennox Research Laboratory environmental test room.

Rated according to US Department of Energy (DOE) test procedures and approved rating methods.

Air Conditioning units and components within bonded for grounding to meet safety standards for servicing required by UL, NEC and CEC.

Units are UL and ULC listed.

Energy rating verified by CSA.

ISO 9001 Registered Manufacturing Quality System.

### **APPLICATION**

SEER up to 11.80.

3 through 5+ ton matches with TXV or RFC.

Three phase power supply.

Vertical air discharge allows concealment behind shrubs at grade level or out of sight on a roof.

Matching add-on furnace indoor coils or air handlers provide a wide range of cooling capacities and applications. See ARI Ratings table.

For indoor unit data, see Indoor Coils and Air Handlers sections.

Units shipped completely factory assembled, piped and wired.

Each unit is test operated at the factory ensuring proper operation.

Installer must set air conditioning unit, connect refrigerant lines and make electrical connections to complete job.

### **REFRIGERATION SYSTEM**

### **● Copper Tube/Enhanced Fin Coil**

Lennox designed and fabricated coil.

Ripple-edged aluminum fins.

Copper tube construction.

Lanced fins provide maximum exposure of fin surface to air stream resulting in excellent heat transfer.

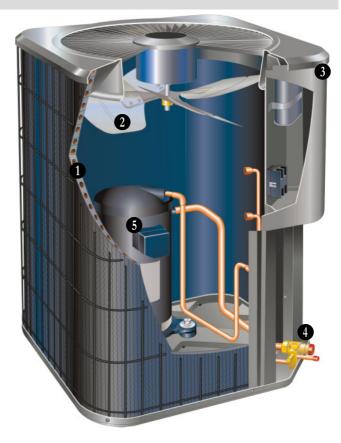
Fin collars grip tubing for maximum contact area.

Flared shoulder tubing connections/silver soldering construction.

Coil is factory tested under high pressure to insure leakproof construction.

Entire coil is accessible for cleaning.

PVC coated steel wire coil guard furnished as standard.  ${f HS29}$  - 3 to 5 tons / Page 2



### **Refrigerant Flow Control**

Units applicable to expansion valve systems or RFC systems when matched with specific evaporator coils.

RFCIV: **RFCIV METERING SYSTEM** Accurately meters **RFCIV ORIFICE BODY** "BULLET" refrigerant in (On Coil) **ORIFICE** system. Refrigerant control LIQUID is **O-RING** accomplished by LINE exact sizing LIQUID refrigerant LINE SCREEN metering orifice. **SEAL** The principle NUT **SWFAT** involves CONNECTION matching

evaporator coil with proper bore size of orifice in metering device.

Equalizes pressure shortly after compressor stops, unit starts unloaded, eliminating need for additional controls. Furnished with air conditioning unit.

### Outdoor Fan

Direct drive fan moves large air volumes uniformly through entire outdoor coil for high refrigerant cooling capacity.

Vertical air discharge minimizes operating sounds and eliminates damage to lawn and shrubs.

Fan motor has sleeve bearings and is inherently protected.

Motor totally enclosed for maximum protection from weather, dust and corrosion.

Rain shield on motor provides additional protection from

Louvered steel top fan guard furnished as standard.

Fan service access accomplished by removal of top panel.

### **FEATURES**

## REFRIGERATION SYSTEM - CONTINUED OPTIONS

### **Expansion Valve Kits (Expansion Valve Systems)**

Must be ordered extra and field installed on certain evaporator units. See ARI Ratings table.

### **High Pressure Switch Kit**

Protects the system from high pressure conditions that can be a result of fan failure or a blocked/dirty coil.

Manual reset.

### Loss of Charge Kit

Helps protect the compressor from damage due to a loss of refrigerant charge.

SPST, normally-closed switch, automatic reset.

### **Refrigerant Line Kits**

Refrigerant lines (suction & liquid) are shipped refrigeration clean.

Lines are cleaned, dried, pressurized and sealed at factory. Suction line fully insulated.

L15 lines are stubbed at both ends.

Kits are not available for HS29-060-062 models and must be field fabricated.

### **CABINET**

Heavy gauge steel cabinet with five station metal wash process.

Powder paint finish provides superior rust and corrosion protection.

Painted base section.

Control box is conveniently located with all controls factory wired.

Corner patch plate allows access to compressor.

Drainage holes are provided in base section for moisture removal.

# Refrigerant Line Connections, Electrical Inlets, Service Valves

Sweat connection suction and liquid lines are located on corner of unit cabinet.

Fully serviceable brass service valves prevent corrosion and provide access to refrigerant system. Suction valve can be fully shut off, while liquid valve may be front seated to manage refrigerant charge while servicing system.

45° elbow furnished for ease of suction line connection. Refrigerant line connections and field wiring inlets are located in one central area of cabinet for easy access. See dimension drawing.

### **OPTIONS**

### **Hail Guards**

Constructed of louvered heavy gauge steel painted to match cabinet.

Surrounds unit on all four sides to prevent damage to the coil.

### **Mounting Base**

High density polyethylene mounting base is lightweight, sturdy, sound absorbing and will withstand the effects of sun, heat, cold, moisture, oil and refrigerant.

Provides permanent foundation for air conditioning units. 22-1/4 x 22-1/4 x 3 in. shipping weight 6 lbs. each.

### **Unit Stand-Off Kit**

Black high density polyethylene feet are available to raise unit off of mounting surface away from damaging moisture.

Four feet are furnished per order number.

### **6** COMPRESSOR

### **Reciprocating Compressor (HS29-036)**

Designed for dependable efficiency with minimum operating cost.

Suction cooled and overload protected with internal pressure relief.

Hermetically sealed with built-in protection from excessive current and temperatures.

Crankcase heater assures proper compressor lubrication (three phase models only).

Running gear assembly resiliently suspended internally inside case.

Compressor installed in unit on resilient rubber mounts assuring low sound and vibration free operation.

HS29-036 models have an internal crankcase heater.

### Copeland Scroll <sup>™</sup> Compressor (HS29-042 thru -062)

Compressor features high efficiency with uniform suction flow, constant discharge flow and high volumetric efficiency and quiet operation.

Compressor consists of two involute spiral scrolls matched together to generate a series of crescent shaped gas pockets between them.

During compression, one scroll remains stationary while the other scroll orbits around it.

Gas is drawn into the outer pocket, the pocket is sealed as the scroll rotates.

As the spiral movement continues,

gas pockets are pushed to the center of the scrolls. Volume between the pockets is simultaneously reduced. When pocket reaches the center, gas is now at high pressure and is forced out of a port located in the center of the fixed scrolls.

During compression, several pockets are compressed simultaneously resulting in a smooth continuous compression cycle.

Continuous flank contact, maintained by centrifugal force, minimizes gas leakage and maximizes efficiency.

Scroll compressor is tolerant to the effects of slugging and contaminants. If this occurs, scrolls separate, allowing liquid or contaminants to to be worked toward the center and discharged.

Low gas pulses during compression reduces operational sound levels.

Compressor motor is internally protected from excessive current and temperature.

Compressor is installed in the unit on resilient rubber mounts for vibration free operation.



### **FEATURES**

### **COMPRESSOR - CONTINUED**

### **OPTIONS**

### **Compressor Low Ambient Cut-Out**

Non-adjustable switch (low ambient cut-out) prevents compressor operation when outdoor temperature is below 35°F.

### Crankcase Heater (-042 thru -062 models)

Crankcase heater prevents migration of liquid refrigerant into compressor and ensures proper compressor lubrication.

Not available for HS29-036 models.

### **Compressor Sound Cover**

A reinforced vinyl compressor cover containing a 1-1/2 inch thick batt of fiberglass insulation.

All open edges are sealed with a one-inch wide hook and loop fastening tape.

### **CONTROLS**

### **OPTIONS**

### Freezestat

Installs on or near the discharge line of the evaporator or on the suction line.

Senses suction line temperature and cycles the compressor off when suction line temperature falls below it's setpoint.

Opens at 29°F and closes at 58°F.

### Low Ambient Kit (Expansion Valve Systems Only)

Air conditioning units operate satisfactorily down to 45°F outdoor air temperature without any additional controls. Low Ambient Control Kit can be field installed, allowing unit operation down to 30°F.

### Thermostat

Thermostat not furnished with unit. See Thermostat bulletins in the Controls tab \section and Lennox Price Book.

### **Timed-Off Control**

Prevents compressor short-cycling and allows time for suction and discharge pressure to equalize.

Permits compressor start-up in an unloaded condition. Automatic reset with 5 minute delay between compressor shut-off and start-up.

<b>OUTDOOR S</b>	OUTDOOR SOUND DATA									
<sup>1</sup> Model										
Number	125	250	500	1000	2000	4000	8000	Number (dB)		
HS29-036	71	68	71	73	67	64	61	78		
HS29-042	71	70	72	72	69	66	64	78		
HS29-048	76	73	76	75	73	69	64	80		
HS29-060	75	73	76	76	73	70	64	80		

NOTE - the octave sound power data does not include tonal correction.

Tested according to ARI Standard 270-95 test conditions.

SPECIFICATIONS													
	lodel No.	HS29-	036	HS29-	042	HS2	9-048	3	HS2	29-060		HS29-	062
Data Nominal Size - <sup>-</sup>	ons (kW)	3 (10.	.6)	3.5 (12	2.3)	4 (	14.1)		5 (	(17.6)		5+ (17	.6+)
<sup>1</sup> Sound Rating Number (dB)	<sup>1</sup> Sound Rating Number (dB)			78			80		84		82		
Connections Liquid line o.d.	- in. (mm)	3/8 (9	.5)	3/8 (9	0.5)	3/8	(9.5)		3/8	3 (9.5)		3/8 (9	.5)
(sweat) Suction line o.d.	, ,	3/4 (19	9.1)	7/8 (22	2.2)	7/8	(22.2)		1-1/8	3 (28.6	5)	1-1/8 (2	28.6)
<sup>2</sup> Refrigerant (HCFC-22) furnish	ed	4 lbs. 13 (2.18 l		6 lbs. 0 (2.72			s. 0 oz 72 kg)			s. 0 oz 63 kg)	•	8 lbs. 0 (3.63	
Outdoor Net face area sq. ft. (m <sup>2</sup>		15.11 (1 	-	15.11 (1 5.40 (0	•		(1.40 (0.50)	•		1 (1.40 0 (1.34	-	15.11 (1 14.40 (1	-
Tube diameter	- in. (mm)	5/16 (7	7.9)	5/16 (7	7.9)	5/16	· 6 (7.9)	,	5/10	6 (7.9)	,	5/16 (7	7.9)
Numbe	er of rows	1	,	1.37	7		.37			2		2	,
Fins pe	r inch (m)	22 (86	66)	22 (86			(748)		18	(748)		18 (74	<del>1</del> 8)
Outdoor Diameter		18 (45		18 (45			(457)			(457)		18 (4	
Eam	of blades	4	,	4	,		4			4		4	,
Mot	or hp (W)	1/6 (12	24)	1/6 (1:	24)	1/3	(249)		1/3	(249)		1/3 (2	49)
	Cfm (L/s)	2520 (1	195)	2400 (1	130)	3115	(1470	))	2930	(1385	5)	2930 (1	385)
	Rpm	1110		107	•	1	125	,		100	,	110	•
	Watts	200	)	190	)	3	325		3	310		310	)
Shipping Data - Ibs. (kg) 1 pack	age	145 (6	66)	158 (7	72)	191	l (87)		20	7 (94)		254 (1	15)
ELECTRICAL DATA									I				
Line voltage data	- 3 phase	208/230V	460V	208/230V	460V	208/230V	460V	575V	208/230V	460V	575V	208/230V	460V
<sup>3</sup> Maximum overcurrent protectio	n (amps)	20	10	25	10	30	15	10	35	15	10	40	20
<sup>4</sup> Minimum circuit	ampacity	14.0	6.9	16.6	7.8	17.9	8.9	7.3	21.2	10.2	8.3	25.1	12.2
Compressor Rated I	oad amps	10.3	5.1	12.4	5.8	12.8	6.4	5.1	15.4	7.4	5.9	18.6	9.0
Locked re	otor amps	77	39	88	44	91	46	37	125	59.6	49.4	128	62
	ver factor	.83	.83	.93	.93	.88	.88	.88	.86	.86	.86	.86	.86
	oad amps	1.1	0.55	1.1	0.55	1.9	0.9	0.9	1.9	0.9	0.9	1.9	0.9
	otor amps	1.9	1.0	1.9	1.0	4.1	2.1	2.1	4.1	2.1	2.1	4.1	2.1
OPTIONAL ACCESSORIE		T BE O	RDEI	RED EX	TRA	ı		,	I	1			
Compressor 208/230\ Crankcase 460\		•		•		•			•			•	
Heater			•		•		•			•			•
575\								•			•		
Compressor Low Ambient Cut-Of		•		•			•			•		•	
Compressor Sound Cover	53J40	•											
Compressor Time-Off Control Freezestat 3/8 in. tubing	47J27 93G35	•		•			•			•		•	
5/8 in. tubing		•		•			•			•		•	
Hail Guards	17L73	•		•			•			•			
High Pressure Switch Kit	94J46	•		•			•			•		•	
Loss of Charge Kit	84M23	•		•			•			•		•	
Low Ambient Kit (TXV systems only)	24H77	•		•			•			•		•	
Mounting Base	69J06	•		•			•			•		•	
Refrigerant L15-41-20 L	.15-41-40 .15-41-50	•											
	.15-65-40 .15-65-50			•			•						
Field	Fabricate									•		•	
Unit Stand-Off Kit	94J45	•		•			•			•		•	

NOTE - Extremes of operating range are plus 10% and minus 5% of line voltage.

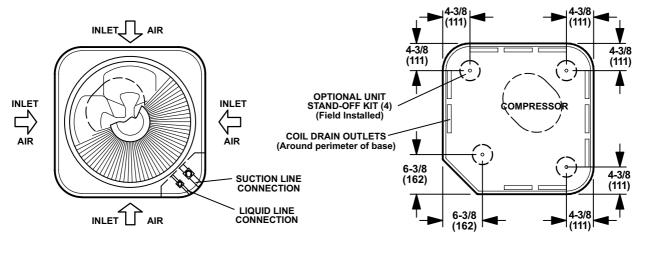
Sound Rating Number rated in accordance with test conditions included in ARI Standard 270.

Refrigerant charge is sufficient for 15 ft. length line set.

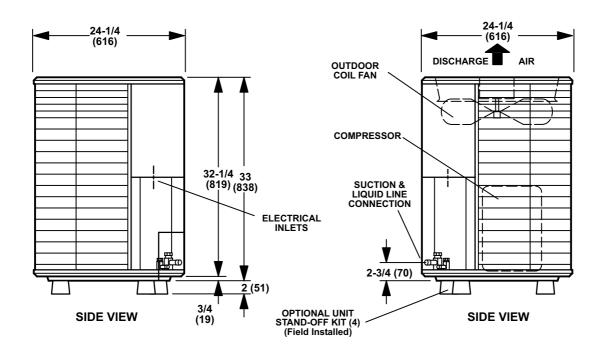
HACR type breaker or fuse.

Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

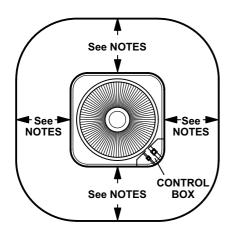
### **DIMENSIONS - INCHES (MM)**



TOP VIEW TOP VIEW BASE SECTION



### **INSTALLATION CLEARANCES - INCHES (MM)**



### **NOTES:**

Service clearance of 30 in. (762 mm) must be maintained on one of the sides adjacent to the control box.

Clearance to one of the other three sides must be 36 in. (914 mm)

Clearance to one of the remaining two sides may be 12 in. (305 mm) and the final side may be 6 in. (152 mm).

A clearance of 24 in. (610 mm) must be maintained between two units.

48 in. (1219 mm) clearance required on top of unit.

ARI RATI		andard 210/2	240 Detines				
Caaling C		1	_	1	Indoor I Init Model No	Expansion	
Cooling C	kW	SEER	iency EER	Total Unit Watts	Indoor Unit Model No.	Device	
HS29-03			LLIX			3 TOI	
R-22 Up-Flo					Indoor Coil	3 101	
34,000	10.0	10.00	9.40	3620	<sup>3</sup> C33-36A/B/C	<sup>2</sup> <b>26K34</b>	
35,400	10.4	10.00	9.60	3685	<sup>3</sup> C33-42B	<sup>2</sup> 26K34	
36,200	10.4	10.00	9.80	3700	<sup>3</sup> C33-38A/B	<sup>2</sup> 26K34	
36,600	10.7	10.00	9.85	3700	<sup>3</sup> C33-44C	<sup>2</sup> 26K34	
36,800	10.7	10.00	9.85	3723	<sup>3</sup> C33-48B/C	<sup>2</sup> 26K34	
			9.00	3740		- 20N34	
Down-Flow		•	1 0 00	2055	Indoor Coil  3 CR33-30/36A/B/C-F	<sup>2</sup> <b>26K34</b>	
35,800	10.5	10.00	9.80	3655		- 20N34	
Horizontal I			0.05	2005	Indoor Coil	2 201/24	
35,600	10.4	10.00	9.65	3695	<sup>3</sup> CH23-41	<sup>2</sup> 26K34	
35,600	10.4	10.00	9.65	3695	<sup>3</sup> CH33-36A/B/C-2F	<sup>2</sup> <b>26K34</b>	
R-22 Air Ha		40.05	0.40	0500	Air Handler	[ t TV/	
33,400	9.8	10.05	9.40	3560	<sup>3</sup> CB29M-31 (Multi-Position)	Factory TXV	
34,000	10.0	10.05	9.25	3675	<sup>3</sup> CB29M-41 (Multi-Position)	Factory TXV	
35,000	10.3	10.80	9.65	3625	<sup>3</sup> CB30M-31 (Multi-Position)	Factory TXV	
35,000	10.3	10.80	9.65	3625	<sup>3</sup> CB30U-31 (Up-Flow)	Factory TXV	
36,000	10.5	10.50	9.60	3750	<sup>3</sup> CB29M-46 (Multi-Position)	<sup>2</sup> <b>26K34</b>	
36,400	10.7	10.30	9.50	3830	<sup>3</sup> CB30M-41 (Multi-Position)	Factory TXV	
36,400	10.7	10.30	9.50	3830	<sup>3</sup> CB30U-41/46 (Up-Flow)	<sup>2</sup> 26K34	
36,400	10.7	10.50	10.00	3645	<sup>3</sup> CB30M-46 (Multi-Position)	<sup>2</sup> <b>26K34</b>	
36,400	10.7	10.50	10.10	3600	<sup>4</sup> CB31MV-41 (Multi-Position)	Factory TXV	
37,000	10.8	10.70	10.10	3660	<sup>3</sup> CB30M-51 (Multi-Position)	<sup>2</sup> <b>26K34</b>	
37,000	10.8	10.70	10.10	3660	<sup>3</sup> CB30U-51 (Up-Flow)	<sup>2</sup> <b>26K34</b>	
37,400	11.0	11.05	10.55	3535	<sup>4</sup> CB31MV-51 (Multi-Position)	<sup>2</sup> <b>26K34</b>	
35,400	10.4	10.00	9.65	3675	<sup>4,6</sup> CVP10-41/EC10Q3 (Up-Flow)	Factory TXV	
35,400	10.4	10.00	9.65	3675	<sup>4,6</sup> CVP10-46/EC10Q4 (Up-Flow)	Factory TXV	
HS29-03	6 WITH	RFC				3 TO	
R-22 Up-Flo	ow Indoor	Coils			Indoor Coil		
34,000	10.0	10.00	9.50	3615	<sup>3</sup> C33-36A/B/C	<sup>2</sup> 0.073 ( <b>11W02</b> )	
35,200	10.3	10.00	9.55	3685	<sup>3</sup> C33-42B	<sup>2</sup> 0.073 ( <b>11W02</b> )	
Down-Flow	Indoor Co	oils	•	•	Indoor Coil	•	
35,600	10.4	10.00	9.75	3655	<sup>3</sup> CR33-30/36A/B/C-F	<sup>2</sup> 0.073 ( <b>11W02</b> )	
Horizontal I	Indoor Coi	ils		•	Indoor Coil	•	
35,400	10.4	10.00	9.60	3695	<sup>3</sup> CH23-41	<sup>2</sup> 0.073 ( <b>11W02</b> )	
	1	1	1	1	12	1 2	

<sup>1</sup> Certified in accordance with USE certification program which is based on ARI Standard 210/240; 95°F (35°C) outdoor air temperature, 80°F (27°C) db / 67°F (19°C) wb entering evaporator air with 25 ft. (7.6 m) of connecting refrigerant lines.

<sup>3</sup> CH33-36A/B/C-2F

3695

9.60

10.4

10.00

35,400

<sup>2</sup> 0.073 (**11W02**)

Factory TXV expansion valve or RFCIV device on indoor unit MUST be replaced with separately ordered expansion valve kit or RFC orifice shown. RFCIV orifice is shipped with the air conditioner.

Blower must be capable of time-off blower delay. Time Delay Relay Kit (58M81) is recommend for field installation. Blower control must be set for a time-off blower delay.

<sup>&</sup>lt;sup>6</sup> Canada only.

ARI RATI		andard 210/2	240 Ratings				
Cooling C			iency	Total Unit	Indoor Unit Model No.	Expansion	
Btuh	kW	SEER	EER	Watts		Device	
HS29-04					_	3.5 TO	
R-22 Up-Flo			0.40		Indoor Coil	120010	
38,000	11.1	10.50	9.10	4175	<sup>3</sup> C33-42B	<sup>2</sup> 26K35	
39,500	11.6	10.90	9.40	4210	<sup>3</sup> C33-44C	<sup>2</sup> 26K35	
40,000	11.7	10.95	9.50	4215	<sup>3</sup> C33-48B/C	<sup>2</sup> 26K35	
40,000	11.7	11.00	9.50	4220	<sup>3,5</sup> C33-50/60C	<sup>2</sup> 26K35	
40,500	11.9	11.10	9.55	4235	<sup>3</sup> C33-60D	<sup>2</sup> <b>26K35</b>	
45,500	13.3	11.50	10.10	4515	<sup>3</sup> C33-49C	<sup>2</sup> 26K35	
46,000	13.5	11.50	10.20	4515	<sup>3</sup> C33-43B/C	<sup>2</sup> 26K35	
47,500	13.9	11.80	10.45	4555	<sup>3</sup> C33-62C	<sup>2</sup> <b>26K35</b>	
Up-Flow Inc			40.45	1040	Up-Flow Coils + Furnace	120000	
45,000	13.2	11.85	10.45	4310	C33-44C-2 <sup>4</sup> G60UHV-60C-090	<sup>2</sup> 26K35	
45,000	13.2	11.90	10.45	4315	C33-48C-2 <sup>4</sup> G60UHV-60C-090	<sup>2</sup> 26K35	
45,500	13.3	12.00	10.50	4325	C33-50/60C-2 <sup>4</sup> G60UHV-60C-090	<sup>2</sup> 26K35	
Down-Flow			0.05	2005	Indoor Coil	12.00025	
35,600	10.4	10.50	9.05	3925	<sup>3</sup> CR33-30/36A-F	<sup>2</sup> 26K35	
37,400	11.0	10.60	9.15	4085	<sup>3</sup> CR33-30/36B/C-F	<sup>2</sup> 26K35	
39,000	11.4	10.70	9.30	4200	<sup>3</sup> CR33-48B/C-F	<sup>2</sup> 26K35	
40,000	11.7	10.95	9.50	4215	<sup>3</sup> CR33-50/60C-F	<sup>2</sup> 26K35	
40,000	11.7	10.95	9.50	4215	<sup>3</sup> CR33-60D-F	<sup>2</sup> <b>26K35</b>	
Horizontal I					Indoor Coil	10	
39,000	11.4	10.70	9.30	4195	<sup>3</sup> CH23-41	<sup>2</sup> 26K35	
39,000	11.4	10.75	9.30	4195	<sup>3</sup> CH23-51	<sup>2</sup> 26K35	
39,500	11.6	10.85	9.40	4210	<sup>3</sup> CH23-65	<sup>2</sup> <b>26K35</b>	
39,500	11.6	10.85	9.40	4210	<sup>3</sup> CH33-42B-2F	<sup>2</sup> <b>26K35</b>	
40,500	11.9	11.05	9.55	4230	<sup>3</sup> CH33-48C-2F	<sup>2</sup> <b>26K35</b>	
40,500	11.9	11.10	9.55	4235	<sup>3</sup> CH33-60D-2F	<sup>2</sup> <b>26K35</b>	
Horizontal I					Horizontal Coils + Furnace		
45,500	13.3	12.05	10.50	4330	CH33-48C-2F <sup>4</sup> G60UHV-60C-090	<sup>2</sup> 26K35	
46,000	13.5	12.15	10.60	4345	CH33-50/60C-2F <sup>4</sup> G60UHV-60C-090	<sup>2</sup> <b>26K35</b>	
R-22 Air Ha					Air Handler		
36,400	10.7	10.05	8.75	4165	<sup>3</sup> CB29M-41 (Multi-Position)	<sup>2</sup> 26K35	
38,000	11.1	10.95	9.45	4030	<sup>3</sup> CB30M-41 (Multi-Position)	<sup>2</sup> <b>26K35</b>	
38,000	11.1	10.60	9.15	4160	<sup>3</sup> CB29M-46 (Multi-Position)	Factory TXV	
38,500	11.3	11.00	9.40	4085	<sup>3</sup> CB30M-46 (Multi-Position)	Factory TXV	
38,500	11.3	11.00	9.40	4085	<sup>3</sup> CB30U-41/46 (Up-Flow)	Factory TXV	
39,000	11.4	10.55	9.10	4290	<sup>3</sup> CB29M-51 (Multi-Position)	Factory TXV	
41,000	12.0	11.50	9.95	4115	<sup>3</sup> CB30M-51(Multi-Position)	Factory TXV	
41,000	12.0	11.50	9.95	4115	<sup>3</sup> CB30U-51 (Up-Flow)	Factory TXV	
41,500	12.2	11.00	9.80	4235	<sup>4</sup> CB31MV-41 (Multi-Position)	Factory TXV	
42,500	12.5	11.20	10.05	4230	<sup>4</sup> CB31MV-51 (Multi-Position)	Factory TXV	
38,500	11.3	10.65	9.20	4185	<sup>3,6</sup> CVP10-46/EC10Q4 (Up-Flow)	Factory TXV	
39,000	11.4	10.75	9.30	4200	<sup>3,6</sup> CVP10-51/EC10Q4 (Up-Flow)	Factory TXV	
HS29-04			<u> </u>	1		3.5 TC	
R-22 Up-Flo					Indoor Coil		
40,000	11.7	10.00	9.15	4375	<sup>3</sup> C33-42B	<sup>2</sup> 0.078 ( <b>11W04</b> )	
42,000	12.3	10.20	9.50	4420	<sup>3</sup> C33-48B/C	<sup>2</sup> 0.078 ( <b>11W04</b> )	
Down-Flow			1	1	Indoor Coil	, ,	
40,000	11.7	10.00	9.35	4280	<sup>3</sup> CR33-30/36B/C-F	<sup>2</sup> 0.078 ( <b>11W04</b> )	
41,000	12.0	10.00	9.35	4385	<sup>3</sup> CR33-48B/C-F	<sup>2</sup> 0.078 ( <b>11W04</b> )	
Horizontal I			1	1	Indoor Coil	· · · / (//-/-/-/-/-/-/-/-/-/-/-/-/-/-	
40,500	11.9	10.00	9.30	4355	<sup>3</sup> CH23-41	<sup>2</sup> 0.078 ( <b>11W04</b> )	
40,500	11.9	10.00	9.30	4355	<sup>3</sup> CH33-42B-2F	<sup>2</sup> 0.078 ( <b>11W04</b> )	
41,500	12.2	10.00	9.45	4395	<sup>3</sup> CH23-51		
41,500	12.2	10.00	9.45	4395	<sup>3</sup> CH33-48C-2F		
Cortified in ac	1 12.2	10.00	J 3.73	+000	Standard 210/240: 95°E (35°C) outdoor air temporature	80°E (27°C) db / 67°E (10°C)	

<sup>1</sup> Certified in accordance with USE certification program which is based on ARI Standard 210/240; 95°F (35°C) outdoor air temperature, 80°F (27°C) db / 67°F (19°C) wb entering evaporator air with 25 ft. (7.6 m) of connecting refrigerant lines.

<sup>&</sup>lt;sup>2</sup> Factory TXV expansion valve or RFCIV device on indoor unit MUST be replaced with separately ordered expansion valve kit or RFC orifice shown. RFCIV orifice is shipped with the air conditioner.

Blower must be capable of time-off blower delay. Time Delay Relay Kit (58M81) is recommend for field installation.

Blower control must be set for a time-off blower delay.

<sup>6</sup> Canada only.

•		i	240 Ratings			Expansion
Cooling C	1		ency	Total Unit Watts	Indoor Unit Model No.	Device
Btuh	kW	SEER	EER	walis		4.70
HS29-04						4 TO
R-22 Up-Flo			9.25	5705	Indoor Coil 3 C33-44C	<sup>2</sup> <b>26K35</b>
45,000	13.2	10.00	9.25		<sup>3</sup> C33-48B/C	<sup>2</sup> 26K35
46,000 46,000	13.5 13.5	10.00 10.00	9.25	4980 4975	<sup>3</sup> C33-50/60C	<sup>2</sup> 26K35
47,000	13.8	10.00	9.35	5020	<sup>3</sup> C33-60D	<sup>2</sup> 26K35
48,000	14.1	10.00	9.50	5065	<sup>3</sup> C33-62D	<sup>2</sup> 26K35
Down-Flow			9.50	3003	Indoor Coil	- 20K33
46,000	13.5	10.00	9.25	4975	<sup>3</sup> CR33-48B/C-F	<sup>2</sup> <b>26K35</b>
46,500	13.5	10.00	9.23	5010	<sup>3</sup> CR33-50/60C-F	<sup>2</sup> 26K35
46,500	13.6	10.00	9.30	5010	<sup>3</sup> CR33-60D-F	<sup>2</sup> 26K35
Horizontal I			9.30	3010	Indoor Coil	- 20N33
45,500	13.3	10.00	9.15	4970	<sup>3</sup> CH23-51	<sup>2</sup> <b>26K35</b>
45,500 45,500	13.3	10.00	9.15	4970 4970	<sup>3</sup> CH33-44/48B-2F	<sup>2</sup> 26K35
46,000	13.5	10.00	9.13	4970	<sup>3</sup> CH23-65	<sup>2</sup> 26K35
46,000	13.5	10.00	9.20	4990	<sup>3</sup> CH33-50/60C-2F	<sup>2</sup> 26K35
48,000	14.1	10.00	9.50	5065	<sup>3</sup> CH23-68	<sup>2</sup> 26K35
48,000	14.1	10.00	9.50	5065	<sup>3</sup> CH33-62D-2F	<sup>2</sup> 26K35
R-22 Air Ha		10.00	3.50	3003	Air Handler	20133
43,500	12.7	10.20	9.35	4655	<sup>3</sup> CB30M-41 (Multi-Position)	<sup>2</sup> <b>26K35</b>
43,500	12.7	10.25	9.35	4640	4 CB31MV-41 (Multi-Position)	<sup>2</sup> <b>26K35</b>
45,000	13.2	10.25	9.00	5000	<sup>3</sup> CB29M-51 (Multi-Position)	Factory TXV
45,000	13.2	10.50	9.50	4725	<sup>3</sup> CB30M-46 (Multi-Position)	Factory TXV
45,000	13.2	10.50	9.50	4725	<sup>3</sup> CB30U-41/46 (Up-Flow)	Factory TXV
45,500	13.3	10.00	9.00	5050	<sup>3</sup> CB29M-65 (Multi-Position)	Factory TXV
46,000	13.5	10.50	9.45	4855	<sup>3</sup> CB30M-51 (Multi-Position)	Factory TXV
46,000	13.5	10.50	9.45	4855	<sup>3</sup> CB30U-51 (Up-Flow)	Factory TXV
46,000	13.5	10.60	9.55	4805	<sup>4</sup> CB31MV-51 (Multi-Position)	Factory TXV
46,500	13.6	10.50	9.35	4965	<sup>3</sup> CB30M-65 (Multi-Position)	Factory TXV
46,500	13.6	10.50	9.35	4965	<sup>3</sup> CB30U-65 (Up-Flow)	Factory TXV
47,000	13.8	10.70	9.60	4805	4 CB31MV-65 (Multi-Position)	Factory TXV
44,500	13.0	10.00	9.05	4915	<sup>3,6</sup> CVP10-51/EC10Q4 (Up-Flow)	Factory TXV
45,500	13.3	10.00	9.15	4965	<sup>3,6</sup> CVP10-65/EC10Q5 (Up-Flow)	Factory TXV
HS29-04			0.10	1000	0 11 10 00/2010 Q0 (0p 110w)	4 TO
R-22 Up-Flo					Indoor Coil	4101
46,000	13.5	10.00	9.25	4960	<sup>3</sup> C33-48B/C	<sup>2</sup> 0.086 ( <b>11W08</b> )
47,000	13.8	10.00	9.35	5020	<sup>3</sup> C33-60D	<sup>2</sup> 0.086 ( <b>11W08</b> )
Down-Flow			0.00	0020	Indoor Coil	0.000 (111100)
46,000	13.5	10.00	9.25	4975	<sup>3</sup> CR33-48B/C-F	<sup>2</sup> 0.086 ( <b>11W08</b> )
46,500	13.6	10.00	9.30	5010	<sup>3</sup> CR33-50/60C-F	<sup>2</sup> 0.086 ( <b>11W08</b> )
46,500	13.6	10.00	9.30	5010	<sup>3</sup> CR33-60D-F	<sup>2</sup> 0.086 ( <b>11W08</b> )
Horizontal I			1 2.00		Indoor Coil	
45,500	13.3	10.00	9.15	4970	<sup>3</sup> CH23-51	<sup>2</sup> 0.086 ( <b>11W08</b> )
45,500	13.3	10.00	9.15	4970	<sup>3</sup> CH33-48C-2F	<sup>2</sup> 0.086 ( <b>11W08</b> )
45,500	13.3	10.00	9.15	4970	<sup>3</sup> CH33-44/48B-2F	<sup>2</sup> 0.086 ( <b>11W08</b> )
46,000	13.5	10.00	9.20	4990	<sup>3</sup> CH23-65	<sup>2</sup> 0.086 ( <b>11W08</b> )
46,000	13.5	10.00	9.20	4990	<sup>3</sup> CH33-60D-2F	<sup>2</sup> 0.086 ( <b>11W08</b> )

<sup>1</sup> Certified in accordance with USE certification program which is based on ARI Standard 210/240; 95°F (35°C) outdoor air temperature, 80°F (27°C) db / 67°F (19°C) wb entering evaporator air with 25 ft. (7.6 m) of connecting refrigerant lines.

Factory TXV expansion valve or RFCIV device on indoor unit MUST be replaced with separately ordered expansion valve kit or RFC orifice shown. RFCIV orifice is shipped with the air conditioner.

Blower must be capable of time-off blower delay. Time Delay Relay Kit (58M81) is recommend for field installation.

Blower control must be set for a time-off blower delay.

<sup>&</sup>lt;sup>6</sup> Canada only.

ARI RATI		andard 210/2	240 Ratings			
Cooling C		i	iency	Total Unit	Indoor Unit Model No.	Expansion
Btuh	kW	SEER	EER	Watts		Device
HS29-06	O WITH	TXV	l .	ı	1	5 TON
R-22 Up-Flo	ow Indoor	Coils			Indoor Coil	
55,500	16.3	10.00	8.85	6285	<sup>3</sup> C33-50/60C	<sup>2</sup> <b>26K35</b>
57,500	16.8	10.00	9.20	6245	<sup>3</sup> C33-60D	<sup>2</sup> 26K35
58,500	17.1	10.00	9.35	6270	<sup>3</sup> C33-62D	<sup>2</sup> <b>26K35</b>
Down-Flow	Indoor Co	oils	I	L	Indoor Coil	
55,500	16.3	10.00	9.30	5980	<sup>3</sup> CR33-48B/C-F	<sup>2</sup> <b>26K35</b>
57,500	16.8	10.00	9.50	6060	<sup>3</sup> CR33-50/60C-F	<sup>2</sup> <b>26K35</b>
57,500	16.8	10.00	9.50	6060	<sup>3</sup> CR33-60D-F	<sup>2</sup> <b>26K35</b>
Horizontal I	Indoor Coi	ls	I	L	Indoor Coil	
58,000	17.0	10.00	9.30	6250	<sup>3</sup> CH23-65	<sup>2</sup> 26K35
58,000	17.0	10.00	9.30	6250	<sup>3</sup> CH33-60D-2F	<sup>2</sup> <b>26K35</b>
58,500	17.1	10.00	9.35	6270	<sup>3</sup> CH23-68	<sup>2</sup> <b>26K35</b>
58,500	17.1	10.00	9.35	6270	<sup>3</sup> CH33-62D-2F	<sup>2</sup> <b>26K35</b>
R-22 Air Ha					Air Handler	
55,000	16.1	10.05	8.65	6360	<sup>3</sup> CB29M-51 (Multi-Position)	Factory TXV
55,500	16.3	10.05	8.80	6315	<sup>3</sup> CB29M-65 (Multi-Position)	Factory TXV
56,000	16.4	10.50	9.45	5915	<sup>3</sup> CB30M-51 (Multi-Position)	Factory TXV
56,000	16.4	10.50	9.45	5915	<sup>3</sup> CB30U-51 (Up-Flow)	Factory TXV
56,000	16.4	10.60	9.55	5865	4 CB31MV-51 (Multi-Position)	Factory TXV
57,500	16.8	10.50	9.30	6190	<sup>3</sup> CB30M-65 (Multi-Position)	Factory TXV
57,500	16.8	10.50	9.30	6190	<sup>3</sup> CB30U-65 (Up-Flow)	Factory TXV
57,500	16.8	10.60	9.35	6155	4 CB31MV-65 (Multi-Position)	Factory TXV
54,500	16.0	10.00	9.20	5935	<sup>3,6</sup> CVP10-51/EC10Q4 (Up-Flow)	Factory TXV
56,000	16.4	10.00	9.30	6010	3,6 CVP10-65/EC10Q5 (Up-Flow)	Factory TXV
HS29-06			3.00	0010	- 011 10 00/2010Q0 (0p 110w)	5 TOI
R-22 Up-Flo					Indoor Coil	3 101
58,500	17.1	10.05	9.60	6085	<sup>3</sup> C33-50/60C	<sup>2</sup> 26K35
60,000	17.6	10.05	9.80	6115	<sup>3</sup> C33-60D	<sup>2</sup> 26K35
62,500	18.3	10.23	10.00	6255	<sup>3</sup> C33-62D	<sup>2</sup> 26K35
	<del></del>	<u>.                                    </u>	10.00	0233		- 20N33
Down-Flow	16.3		9.15	6055	Indoor Coil  3 CR33-48B/C-F	<sup>2</sup> 26K35
55,500 58,500	17.1	10.00 10.00	9.15	6235	<sup>3</sup> CR33-50/60C-F	<sup>2</sup> 26K35
	17.1				<sup>3</sup> CR33-60D-F	<sup>2</sup> 26K35
58,500 Horizontal I		10.00	9.40	6235		- 20N33
			0.45	6045	Indoor Coil 3 CH23-65	<sup>2</sup> <b>26K35</b>
59,000	17.3	9.45	9.45	6245		
59,000	17.3	9.45	9.45	6245	<sup>3</sup> CH33-60D-2F	<sup>2</sup> 26K35
62,500	18.3	10.75	10.05	6230	<sup>3</sup> CH23-68	<sup>2</sup> 26K35
62,500	18.3	10.75	10.05	6230	<sup>3</sup> CH33-62D-2F	<sup>2</sup> <b>26K35</b>
R-22 Air Ha					Air Handler	
58,000	17.0	11.05	10.60	5460	<sup>3</sup> CB30M-51 (Multi-Position)	Factory TXV
58,000	17.0	11.05	10.60	5460	<sup>3</sup> CB30U-51 (Up-Flow)	Factory TXV
58,000	17.0	11.10	10.70	5410	<sup>4</sup> CB31MV-51 (Multi-Position)	Factory TXV
59,000	17.3	10.05	9.85	5995	<sup>3</sup> CB29M-65 (Multi-Position)	Factory TXV
59,500	17.4	11.05	10.50	5665	<sup>3</sup> CB30M-65 (Multi-Position)	Factory TXV
59,500	17.4	11.05	10.50	5665	<sup>3</sup> CB30U-65 (Up-Flow)	Factory TXV
60,000	17.6	11.30	10.65	5635	<sup>4</sup> CB31MV-65 (Multi-Position)	Factory TXV
58,000	17.0	10.00	9.40	6170	<sup>3,6</sup> CVP10-65/EC10Q5	Factory TXV

<sup>1</sup> Certified in accordance with USE certification program which is based on ARI Standard 210/240; 95°F (35°C) outdoor air temperature, 80°F (27°C) db / 67°F (19°C) wb entering evaporator air with 25 ft. (7.6 m) of connecting refrigerant lines.

<sup>&</sup>lt;sup>2</sup> Factory TXV expansion valve or RFCIV device on indoor unit MUST be replaced with separately ordered expansion valve kit or RFC orifice shown. RFCIV orifice is shipped with the air conditioner.

Blower must be capable of time-off blower delay. Time Delay Relay Kit (**58M81**) is recommend for field installation.

Blower control must be set for a time-off blower delay.

<sup>&</sup>lt;sup>6</sup> Canada only.











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