



## TECHNICAL GUIDE

### VERTICAL WALL MOUNT AIR HANDLERS

#### FOR USE WITH SPLIT-SYSTEM COOLING & HEAT PUMPS

MODELS: EWN18 - 36 AND EWW18 - 36



## DESCRIPTION

The wall mount air handlers are designed for front or bottom return air position. Offset hanging brackets attach to unit to allow hanging inside closet or it can be installed in the wall with a decorative grill.

The wall mount air handler can be ordered with factory or field installed electric heat kits. They can also be ordered with a piston metering device, R22 TXV factory installed, or R410A TXV factory installed.

## FEATURES

**Cabinet** – All wall mount air handler cabinets are sturdy, galvanized steel and fully insulated with 1/2" foil faced insulation to prevent sweating and mold growth, to provide excellent R-value. Stick pins ensure insulation remains in place. Units ship with disposable filter in filter rack.

**Modular Electric Heat Kits** – Available with circuit breakers. Available in 3, 5, 8, & 10 KW. Models with electric heat include sequencers and temperature limit switches for safe, efficient operation. Heaters are easily installed in the field using molex plugs or can be ordered factory-installed. Controls are accessible from the front for easy service. Electrical connections can be made from the top or left. Disconnect does not protrude through the wall panel. Fan time delay relay standard for increased efficiency.

**Blower** – Direct drive multi-speed blowers circulate air quietly and efficiently. Motor speeds can be easily selected via motor terminals. Swing mounted blowers can be easily removed for service.

**DX Coil** – High efficiency rifled copper tubes/enhanced aluminum fins provide maximum heat transfer. All coils tested at 500 psi then nitrogen pressurized and factory sealed for maximum reliability. Liquid-line Schrader allows pre-installation pressure testing. Most 13 SEER matches can be obtained using the factory installed piston metering device. Field installable TXVs are also available for both R22 and R410A refrigerants.

Drain pan offers bottom primary and secondary drain connections or alternate right side primary. All connections are 3/4" FPT. Access door allows for coil cleaning.

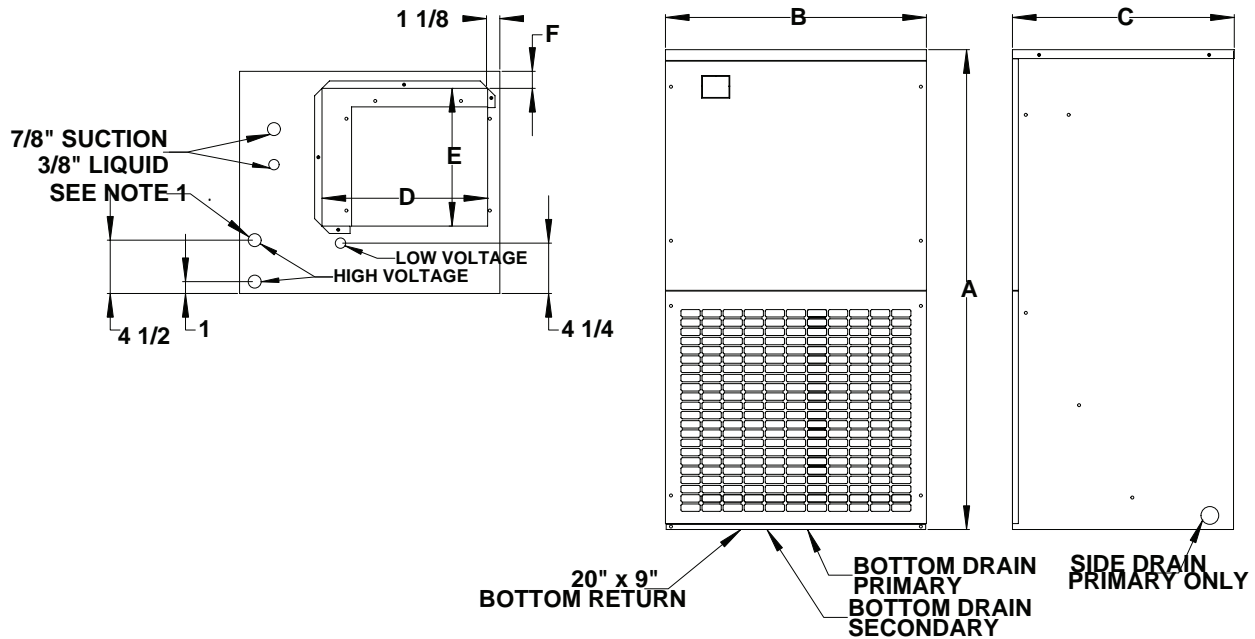
Due to continuous product improvement, specifications are subject to change without notice.

Additional rating information can be found at [www.ahridirectory.org](http://www.ahridirectory.org).

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**PHYSICAL DIMENSIONS**

Models	Dimensions						Wiring Knockouts		Refrigerant Connections Line Size	
	A	B	C	D	E	F	High Volt	Low Volt	Liquid	Suction
	Height	Width	Depth							
EW(N,W)18	37-1/2	22	18-3/4	14	10	3-1/4	1-3/32	7/8	3/8	7/8
EW(N,W)24	37-1/2	22	18-3/4	14	10	3-1/4				
EW(N,W)30	40-1/2	22	18-3/4	14	11-1/2	1-3/8				
EW(N,W)36	40-1/2	22	18-3/4	14	11-1/2	1-3/8				



NOTE 1. CODE MAY REQUIRE INSTALLER TO USE CONDUIT INSIDE CABINET TO ELECTRICAL ENCLOSURE

**COIL TECHNICAL DATA**

Models	Application	Refrig. Conn Types	Face Area (Sq.Ft.)	Rows Deep	Fins Per Inch	Coil Size	Tube Geometry	Tube Dia	Fin Type
EW(N,W)18	Cooling / Heat Pump	Sweat	2.5	3	16	20 x 18	1 x 0.866	3/8 rifled	Lanced
EW(N,W)24			2.5	4	16	20 x 18			
EW(N,W)30			3	4	12	24 x 18			
EW(N,W)36			3	4	14	24 x 18			

**ARI CERTIFIED MATCH-UPS: TCGDS2**

Air Handler	ARI Number	Outdoor Model	SEER	EER	NET MBTUH		Rated CFM
					Total	Sens	
EW(W,N)242T1*	3015852	TCGD18S21S1	14.00	11.40	18.00	14.35	600
EW(W,N)182T1*	3015914		14.00	11.25	18.00	14.35	
EW(W,N)18055	3015912		13.50	11.25	18.00	14.35	
EW(W,N)242T1*	3016444	TCGD24S21S1	14.00	11.15	24.00	18.84	800
EW(W,N)30068	3016446		13.00	11.05	24.00	18.21	
EW(W,N)24059	3016442		13.00	11.15	24.00	18.84	
EW(W,N)362T1*	3016455	TCGD30S21S1	14.00	11.05	29.80	22.91	1000
EW(W,N)302T1*	3016451		13.50	11.00	29.00	22.07	
EW(W,N)36074	3016453		13.00	11.05	29.80	22.91	
EW(W,N)30068	3016449		13.00	11.00	29.00	22.07	
EW(W,N)362T1*	3015927	TCGD36S21S1	13.50	11.00	34.20	26.68	1200
EW(W,N)36074	3016437		13.00	11.00	34.20	26.68	

\*Equipped with non bleed TXV. Must use H model (TCGD\*\*S21S1H) or field installed hard start kit. For models without an "H", refer to tech guide for kit number reference.

**Additional R-22 Charge<sup>5</sup> / Orifice Size for TCGD Air Conditioners**

Outdoor Unit	TCGD18 S21S1(H)	TCGD24 S21S1(H)	TCGD30 S21S1(H)	TCGD36 S21S1(H)
Required Orifice or TXV <sup>1,2</sup>	.055 / S1-4190	.059 / .068 / S1-4190	.068 / .074 / S1-4190	.074 / S1-4190
Factory R22 Charge, lbs-oz	3 - 2	4 - 0	4 - 3	4 - 5
Indoor Coil <sup>3,4</sup>	Additional Charge, oz.			
EW(N,W)18*	55 + 0	-	-	-
	4190 + 0	-	-	-
EW(N,W)24*	-	59 + 1	-	-
	4190 + 7	4190 + 1	-	-
EW(N,W)30*	-	68 + 11	68 + 3	-
	-	-	4190 + 3	-
EW(N,W)36*	-	-	74 + 0	74 - 3
	-	-	4190 + 0	4190 - 3

- For applications requiring a TXV use GuardianAire non-bleed bi-directional TXV.
- Approved metering device shipped with indoor unit.
- All GuardianAire air handlers ship with blower off delays.
- Models require start kits for TXV matches. Outdoor models with "H" on the end of the model number have factory-installed start kits. For models without an "H", refer to tech guide for kit number reference.
- Suggested charge adder only. For reliable performance, always charge the system to 15°F subcooling for TXV or 10° superheat for orifice at ARI A-conditions.

**ARI CERTIFIED MATCH-UPS: TCGDS4**

Air Handler	ARI Number	Outdoor Model	SEER	EER	NET MBTUH		Rated CFM
					Total	Sens	
EW(W,N)184T1*	3023374	TCGD18S41S1	13.00	11.25	18.00	14.35	600
EW(W,N)244T1*	3023376		13.50	11.40	18.00	14.35	
EW(W,N)244T1*	3023378	TCGD24S41S1	13.00	11.15	24.00	18.84	800
EW(W,N)304T1*	3023380		13.50	11.05	24.00	18.21	
EW(W,N)304T1*	3023382	TCGD30S41S1	13.00	11.00	28.60	21.99	1000
EW(W,N)364T1*	3023384		14.00	11.05	29.40	22.74	
EW(W,N)364T1*	3023386		13.50	11.05	35.40	27.07	

\*Equipped with non bleed TXV. No need for field installed hard start kit.

**Additional R-410A Charge<sup>5</sup> TCGDS4 Air Conditioners**

Outdoor Unit	TCGD18S41S1	TCGD24S41S1	TCGD30S41S1	TCGD36S41S1
Required Orifice or TXV <sup>1,2</sup>	S1-4200	S1-4200	S1-4200	S1-4200
Factory R410A Charge, lbs-oz	3 - 3	3 - 13	3 - 14	4 - 9
Indoor Coil <sup>3,4</sup>	Additional Charge, oz.			
EW(N,W)18*	4200 + 0			
EW(N,W)24*	4200 + 0	4200 + 1		
EW(N,W)30*		4200 + 11	4200 + 4	
EW(N,W)36*			4200 + 4	4200 - 4

- For applications requiring a TXV use GuardianAire non-bleed bi-directional TXV.
- Approved metering device shipped with indoor unit.
- All GuardianAire air handlers ship with blower off delays.
- No need for field installed hard start kit.
- Suggested charge adder only. For reliable performance, always charge the system to 15°F subcooling for TXV or 10° superheat for orifice at ARI A-conditions.

**ARI CERTIFIED MATCH-UPS: GCGD**

Air Handler	ARI Number	Outdoor Model	SEER	EER	NET MBTUH		Rated CFM
					Total	Sens	
EW(W,N)182T1*	3024079	GCGD18S21S1	14.00	11.25	18.00	14.35	600
EW(W,N)24059	3024077		13.50	11.25	18.00	14.35	
EW(W,N)242T1*	3024085		14.00	11.40	18.00	14.35	
EW(W,N)24059	3024084	GCGD24S21S1	13.00	11.15	24.00	18.84	800
EW(W,N)242T1*	3040284		14.00	11.15	24.00	18.21	
EW(W,N)30068	3024087		13.00	11.05	24.00	18.84	

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**Cont'd ARI CERTIFIED MATCH-UPS: GCGD**

Air Handler	ARI Number	Outdoor Model	SEER	EER	NET MBTUH		Rated CFM
					Total	Sens	
EW(W,N)30068	3024179	GCGD30S21S1	13.00	11.00	29.00	22.91	1000
EW(W,N)302T1*	3024181		13.50	11.00	29.00	22.07	
EW(W,N)36074	3024183		13.00	11.05	29.80	22.91	
EW(W,N)362T1*	3024185		14.00	11.05	29.80	22.07	
EW(W,N)36074	3024087	GCGD36S21S1	13.00	11.00	34.20	26.68	1200
EW(W,N)362T1*	3024189		13.50	11.00	34.20	26.68	

\*Equipped with non bleed TXV. No need for field installed hard start kit.

Additional R-22 Charge <sup>5</sup> / Orifice Size for GCGD Air Conditioners				
Outdoor Unit	GCGD18 S21S1(H)	GCGD24 S21S1(H)	GCGD30 S21S1(H)	GCGD36 S21S1(H)
Required Orifice or TXV <sup>1,2</sup>	.055 / S1-4190	.059 / .068 / S1-4190	.068 / .074 / S1-4190	.074 / S1-4190
Factory R22 Charge, lbs-oz	3 - 2	4 - 0	4 - 3	4 - 5
Indoor Coil <sup>3,4</sup>	Additional Charge, oz.			
EW(N,W)18*	55 + 0	-	-	-
	4190 + 0	-	-	-
EW(N,W)24*	-	59 + 1	-	-
	4190 + 7	4190 + 1	-	-
EW(N,W)30*	-	68 + 11	68 + 3	-
	-	-	4190 + 3	-
EW(N,W)36*	-	-	74 + 0	74 - 3
	-	-	4190 + 0	4190 - 3

1. For applications requiring a TXV use GuardianAire non-bleed bi-directional TXV.

2. Approved metering device shipped with indoor unit.

3. All GuardianAire air handlers ship with blower off delays.

4. No need for field installed hard start kit.

5. Suggested charge adder only. For reliable performance, always charge the system to 15°F subcooling for TXV or 10° superheat for orifice at ARI A-conditions.

#### ARI CERTIFIED MATCH-UPS: H2RD

Air Handler	ARI Number	Outdoor Model	SEER	EER	NET MBTUH		Rated CFM
					Total	Sens	
EW(W,N)242T1*	3015876	H2RD018S06	13.50	11.40	18.00	14.35	600
EW(W,N)182T1*	3015875		13.50	11.25	18.00	14.35	
EW(W,N)24059	3016428		13.00	11.40	18.00	14.35	
EW(W,N)18055	3015874		13.00	11.25	18.00	14.35	
EW(W,N)302T1*	3015880	H2RD024S06	13.50	11.15	23.20	17.88	800
EW(W,N)242T1*	3015878		13.50	11.25	23.80	18.76	
EW(W,N)30068	3015879		13.00	11.15	23.20	17.88	
EW(W,N)24059	3015877		13.00	11.25	23.80	18.76	
EW(W,N)362T1*	3015906	H2RD030S06	13.50	11.35	30.00	22.99	1000
EW(W,N)302T1*	3015902		13.50	11.20	30.00	22.49	
EW(W,N)36074	3015904		13.00	11.35	30.00	22.99	
EW(W,N)30068	3015881		13.00	11.20	30.00	22.49	
EW(W,N)362T1*	3015910	H2RD036S06	13.50	11.30	36.00	27.32	1200
EW(W,N)36074	3015908		13.00	11.30	36.00	27.32	

\*Equipped with non bleed TXV. No need for field installed hard start kit.

Additional R-22 Charge <sup>5</sup> / Orifice Size for HRD Air Conditioners				
Outdoor Unit	H2RD018S06	H2RD024S06	H2RD030S06	H2RD036S06
Required Orifice or TXV <sup>1,2</sup>	.055 / .059 / S1-4190	.059 / .068 / S1-4190	.068 / .074 / S1-4190	.074 / S1-4190
Factory R22 Charge, lbs-oz	4 - 9	6 - 3	5 - 13	6 - 0
Indoor Coil <sup>3,4</sup>	Additional Charge, oz.			
EW(N,W)18*	55 + 1	-	-	-
	4190 + 1	-	-	-

EW(N,W)24*	59 + 6	59 + 3	-	-
	4190 + 6	4190 + 3	-	-
EW(N,W)30*	-	68 + 12	68 + 10	-
	-	4190 + 12	4190 + 10	-
EW(N,W)36*	-	-	74 + 10	74 + 8
	-	-	4190 + 10	4190 + 8

1. For applications requiring a TXV use GuardianAire non-bleed bi-directional TXV.
2. Approved metering device shipped with indoor unit.
3. All GuardianAire air handlers ship with blower off delays.
4. No need for field installed hard start kit.
5. Suggested charge adder only. For reliable performance, always charge the system to 15°F subcooling for TXV or 10° superheat for orifice at ARI A-conditions.

#### ARI CERTIFIED MATCH-UPS: H1ZD

Air Handler	ARI Number	Outdoor Model	SEER	EER	NET MBTUH		Rated CFM
					Total	Sens	
EW(W,N)244T1*	3015863	H1ZD018S06	13.50	11.50	18.00	14.35	600
EW(W,N)184T1*	3015862		13.50	11.25	18.00	14.35	
EW(W,N)304T1*	3015870	H1ZD024S06	13.50	11.05	23.60	18.05	800
EW(W,N)244T1*	3015864		13.50	11.15	24.00	18.84	
EW(W,N)364T1*	3015872	H1ZD030S06	13.50	11.35	30.00	22.99	1000
EW(W,N)304T1*	3015871		13.50	11.20	29.40	22.24	
EW(W,N)364T1*	3015873	H1ZD036S06	13.50	11.30	36.00	27.32	1200

\*Equipped with non bleed TXV. No need for field installed hard start kit.

#### Additional R-410A Charge<sup>5</sup> HZD Air Conditioners

Outdoor Unit	H1ZD018S06	H1ZD024S06	H1ZD030S06	H1ZD036S06
Required Orifice or TXV <sup>1,2</sup>	S1-4200	S1-4200	S1-4200	S1-4200
Factory R410A Charge, lbs-oz	6 - 1	6 - 2	6 - 5	7 - 13
Indoor Coil <sup>3,4</sup>	Additional Charge, oz.			
EW(N,W)18*	4200 + 2	-	-	-
EW(N,W)24*	4200 + 8	4200 + 1	-	-
EW(N,W)30*	-	4200 + 8	4200 + 11	-
EW(N,W)36*	-	-	4200 + 11	4200 + 10

1. For applications requiring a TXV use GuardianAire non-bleed bi-directional TXV.
2. Approved metering device shipped with indoor unit.
3. All GuardianAire air handlers ship with blower off delays.
4. No need for field installed hard start kit.
5. Suggested charge adder only. For reliable performance, always charge the system to 15°F subcooling for TXV or 10° superheat for orifice at ARI A-conditions.

#### ARI CERTIFIED MATCH-UPS: E1RD

Air Handler	ARI NUMBER	Outdoor Model	SEER	EER	NET MBTUH			HSPF	Rated CFM
					@ 47°	Total	Sens		
EW(W,N)182T1*	3016410	E1RD018S06	14.00	12.00	18.10	18.00	14.40	8.50	600
EW(W,N)18055	3016458		13.00	12.00	18.10	18.00	14.40	8.50	
EW(W,N)302T1*	3016460	E1RD024S06	13.50	11.35	23.00	23.60	17.94	8.20	800
EW(W,N)30068*	3016462		13.00	11.35	23.00	23.60	17.94	8.20	
EW(W,N)24059	3016464		13.00	11.45	23.00	24.00	18.96	8.40	
EW(W,N)362T1*	3016466	E1RD030S06	13.50	11.35	31.00	28.80	22.46	8.15	1000
EW(W,N)36074	3016468		13.00	11.35	31.00	28.80	22.46	8.15	
EW(W,N)302T1*	3016470		13.50	11.20	31.00	28.00	21.84	8.00	
EW(W,N)362T1*	3016472	E1RD036S06	13.00	11.35	36.00	33.80	26.36	8.90	1200

\*Equipped with non bleed TXV. No need for field installed hard start kit.

Additional R-22 Charge <sup>5</sup> / Orifice Size for ERD Heat Pumps				
Outdoor Unit	E1RD018S06	E1RD024S06	E1RD030S06	E1RD036S06
Required Orifice or TXV <sup>1,2</sup>	.055 / S1-4190	.059 / .068 / S1-4190	.074 / S1-4190	S1-4190
Factory R22 Charge, lbs-oz	4 - 9	6 - 3	5 - 13	6 - 0
Indoor Coil <sup>3,4</sup>	Additional Charge, oz.			
EW(N,W)18*	55 - 1	-	-	-
	4190 - 1	-	-	-
EW(N,W)24*	-	59 - 10	-	-
	-	68 + 0	-	-
EW(N,W)30*	-	4190 + 0	4190 + 4	-
	-	-	74 + 0	-
EW(N,W)36*	-	-	4190 + 0	4190 - 13
	-	-	-	-

1. For applications requiring a TXV use GuardianAire non-bleed bi-directional TXV.
2. Approved metering device shipped with indoor unit.
3. All GuardianAire air handlers ship with blower off delays.
4. No need for field installed hard start kit.
5. Suggested charge adder only. For reliable performance, always charge the system to 15°F subcooling for TXV or 10° superheat for orifice at ARI A-conditions.

#### ARI CERTIFIED MATCH-UPS: THGDS2

Air Handler	ARI NUMBER	Outdoor Model	SEER	EER	NET MBTUH			HSPF	Rated CFM
					@ 47°	Total	Sens		
EW(N,W)18055	3061787	THGD18S21S1	13.00	11.25	17.20	18.00	14.40	8.00	600
EW(N,W)182T1*	3061788		13.50	11.25	17.20	18.00	14.40	8.00	
EW(N,W)24059	3061789		13.00	11.40	17.30	18.00	14.40	8.20	
EW(N,W)242T1*	3061793		13.50	11.40	17.30	18.00	14.40	8.20	
EW(N,W)30068	3061795		13.00	11.30	17.20	18.00	13.86	8.05	
EW(N,W)302T1*	3061797		13.50	11.30	17.20	18.00	13.86	8.05	
EW(N,W)24059	3061799	THGD24S21S1	13.00	11.35	23.40	24.00	18.96	8.15	800
EW(N,W)242T1*	3061801		13.50	11.35	23.40	24.00	18.96	8.15	
EW(N,W)30068	3061803		13.00	11.25	23.20	24.00	18.24	8.00	
EW(N,W)302T1*	3061805		13.50	11.25	23.20	24.00	18.24	8.00	
EW(N,W)36074	3061807		13.00	11.40	23.40	24.00	18.72	8.15	
EW(N,W)362T1*	3061809		13.50	11.40	23.40	24.00	18.72	8.15	
EW(N,W)302T1*	3061811	THGD30S21S1	13.00	11.00	29.00	28.40	21.87	7.70	1000
EW(N,W)362T1*	3061813		13.50	11.00	29.00	29.00	22.62	7.75	
EW(N,W)362T1*	3061815	THGD36S21S1	13.00	11.00	34.00	34.20	26.68	8.45	1200

\*Equipped with non bleed TXV. No need for field installed hard start kit.

Additional R-22 Charge <sup>5</sup> / Orifice Size for THGDS2 Heat Pumps				
Outdoor Unit	THGD18S21S1	THGD24S21S1	THGD30S21S1	THGD36S21S1
Required Orifice or TXV <sup>1,2</sup>	.055 / .059 / .068 S1-4190	.059 / .068 / .074 S1-4190	.074 / S1-4190	S1-4190
Factory R22 Charge, lbs-oz	7 - 3	7 - 7	8 - 12	9 - 1
Indoor Coil <sup>3,4</sup>	Additional Charge, oz.			
EW(N,W)18*	55 + 0	-	-	-
	4190 + 0	-	-	-
EW(N,W)24*	59 + 8	59 + 7	-	-
	4190 + 8	4190 + 7	-	-
EW(N,W)30*	68 + 22	68 + 7	-	-
	4190 + 22	4190 + 7	4190 + 3	-
EW(N,W)36*	-	74 + 7	-	-
	-	4190 + 7	4190 + 3	4190 + 3

1. For applications requiring a TXV use GuardianAire non-bleed bi-directional TXV.
2. Approved metering device shipped with indoor unit.
3. All GuardianAire air handlers ship with blower off delays.
4. No need for field installed hard start kit.
5. Suggested charge adder only. For reliable performance, always charge the system to 15°F subcooling for TXV or 10° superheat for orifice at ARI A-conditions.

**ARI CERTIFIED MATCH-UPS: GHGDS2**

Air Handler	ARI NUMBER	Outdoor Model	SEER	EER	NET MBTUH			HSPF	Rated CFM
					@ 47°	Total	Sens		
EW(N,W)18055	3074401	GHGD18S21S1	13.00	11.25	17.20	18.00	14.40	8.00	600
EW(N,W)182T1*	3074403		13.50	11.25	17.20	18.00	14.40	8.00	
EW(N,W)24059	3074405		13.00	11.40	17.30	18.00	14.40	8.20	
EW(N,W)242T1*	3074407		13.50	11.40	17.30	18.00	14.40	8.20	
EW(N,W)30068	3074409		13.00	11.30	17.20	18.00	13.86	8.05	
EW(N,W)302T1*	3074411	GHGD24S21S1	13.50	11.30	17.20	18.00	13.86	8.05	800
EW(N,W)24059	3074413		13.00	11.35	23.40	24.00	18.96	8.15	
EW(N,W)242T1*	3074415		13.50	11.35	23.40	24.00	18.96	8.15	
EW(N,W)30068	3074417		13.00	11.25	23.20	24.00	18.24	8.00	
EW(N,W)302T1*	3074419		13.50	11.25	23.20	24.00	18.24	8.00	
EW(N,W)36074	3074421		13.00	11.40	23.40	24.00	18.72	8.15	
EW(N,W)362T1*	3074423	GHGD30S21S1	13.50	11.40	23.40	24.00	18.72	8.15	1000
EW(N,W)302T1*	3074425		13.00	11.00	29.00	28.40	21.87	7.70	
EW(N,W)362T1*	3074427		13.50	11.00	29.00	29.00	22.62	7.75	
EW(N,W)362T1*	3074431	GHGD36S21S1	13.00	11.00	34.00	34.20	26.68	8.45	1200

\*Equipped with non bleed TXV. No need for field installed hard start kit.

**Additional R-22 Charge<sup>5</sup> / Orifice Size for GHGDS2 Heat Pumps**

Outdoor Unit	GHGD18S21S1	GHGD24S21S1	GHGD30S21S1	GHGD36S21S1
Required Orifice or TXV <sup>1,2</sup>	.055 / .059 / .068 S1-4190	.059 / .068 / .074 S1-4190	.074 / S1-4190	S1-4190
Factory R22 Charge, lbs-oz	7 - 3	7 - 7	8 - 12	9 - 1
Indoor Coil <sup>3,4</sup>	Additional Charge, oz.			
EW(N,W)18*	55 + 0	-	-	-
	4190 + 0	-	-	-
EW(N,W)24*	59 + 8	59 + 7	-	-
	4190 + 8	4190 + 7	-	-
EW(N,W)30*	68 + 22	68 + 7	-	-
	4190 + 22	4190 + 7	4190 + 3	-
EW(N,W)36*	-	74 + 7	-	-
	-	4190 + 7	4190 + 3	4190 + 3

1. For applications requiring a TXV use GuardianAire non-bleed bi-directional TXV.

2. Approved metering device shipped with indoor unit.

3. All GuardianAire air handlers ship with blower off delays.

4. No need for field installed hard start kit.

5. Suggested charge adder only. For reliable performance, always charge the system to 15°F subcooling for TXV or 10° superheat for orifice at ARI A-conditions.

**ARI CERTIFIED MATCH-UPS: THGDS4**

Air Handler	ARI NUMBER	Outdoor Model	SEER	EER	NET MBTUH			HSPF	Rated CFM
					@ 47°	Total	Sens		
EW(W,N)184T1*	3174969	THGD18S41S1	13.00	11.25	17.20	17.60	14.26	8.00	600
EW(W,N)244T1*	3174971		13.50	11.40	17.30	18.00	14.40	8.20	
EW(W,N)304T1*	3174973		13.50	11.30	17.20	17.90	13.78	8.05	
EW(W,N)244T1*	3174970	THGD24S41S1	13.00	11.25	23.20	24.00	18.96	8.05	800
EW(W,N)304T1*	3174974		13.50	11.15	23.20	23.40	18.02	7.90	
EW(W,N)364T1*	3174977		13.50	11.25	23.20	24.00	18.72	8.05	
EW(W,N)304T1*	3174972	THGD30S41S1	13.00	11.00	28.00	27.60	21.53	7.70	1000
EW(W,N)364T1*	3174975		13.00	11.00	28.20	28.20	22.28	7.70	
EW(W,N)364T1*	3174976	THGD36S41S1	13.00	11.00	35.00	34.20	26.68	7.95	1200

\*Equipped with non bleed TXV. No need for field installed hard start kit.

Additional R410a Charge <sup>5</sup> for THGDS4 Heat Pumps				
Outdoor Unit	THGD18S41S1	THGD24S41S1	THGD30S41S1	THGD36S41S1
Required Orifice or TXV <sup>1,2</sup>	S1-4200	S1-4200	S1-4200	S1-4200
Factory R410 Charge, lbs-oz	6 – 5	8 – 7	9 – 12	9 – 15
Indoor Coil <sup>3,4</sup>	Additional Charge, oz.			
EW(N,W)18*	4200 + 0	-	-	-
EW(N,W)24*	4200 + 7	4200 + 8	-	-
EW(N,W)30*	4200 + 19	4200 + 21	4200 - 4	-
EW(N,W)36*	-	4200 + 21	4200 - 4	4200 - 4

1. For applications requiring a TXV use GuardianAire non-bleed bi-directional TXV.

2. Approved metering device shipped with indoor unit.

3. All GuardianAire air handlers ship with blower off delays.

4. No need for field installed hard start kit.

5. Suggested charge adder only. For reliable performance, always charge the system to 15°F subcooling for TXV or 10° superheat for orifice at ARI A-conditions.

#### NOMINAL COOLING CAPACITY

Models	Rated CFM	Entering Air °F (Dry/Wet Bulb)	MBTUH @ Evaporator Temp & Corresponding Pressure °F/PSIG			
			35°F / 61.5 psig	40°F / 68.5 psig	45°F / 76.0 psig	50°F / 84.0 psig
EW(N,W)18	600	85/72	24.0	21.8	19.5	17.0
		80/67	22.6	20.3	18.0	15.6
		75/62	21.5	19.1	16.5	13.9
		70/57	21.1	18.4	15.3	11.9
EW(N,W)24	800	85/72	32.2	29.2	26.1	22.7
		80/67	30.1	27.2	24.0	20.8
		75/62	27.6	24.8	22.0	17.9
		70/57	23.2	22.0	20.2	13.1
EW(N,W)30	1000	85/72	40.0	36.5	32.5	28.4
		80/67	38.0	34.0	30.0	25.7
		75/62	33.6	29.2	27.7	22.2
		70/57	33.0	29.4	25.6	21.6
EW(N,W)36	1200	85/72	46.5	42.3	37.8	33.3
		80/67	45.2	39.9	35.0	29.9
		75/62	38.4	35.2	32.3	26.2
		70/57	35.5	32.6	30.2	23.6

#### ACCESSORIES

Refer to Price Manual for specific model numbers.

**TXV Kits** – TXV kits are available for applications and converting R22 to R410a or as a service replacement. All kits are bolt-on and require no brazing to install.

**Electric Heaters** – EK models shown under electrical data include sequential operation and temperature limit switches for safe, efficient operation. Circuit breakers are provided as part of the electric heat kit.

#### LIMITATIONS

These units must be wired and installed in accordance with all national and local safety codes. Voltage limits are as follows:

Air Handler Voltage	Voltage Code	<sup>1</sup> Normal Operating Voltage Range
208/230-1-60	06	187-253

1. Rated in accordance with ARI Standard 110, utilization range "A".

Airflow must be within the minimum and maximum limits approved for electric heat, evaporator coils and outdoor units.

Entering Air Temperature Limits			
Wet Bulb Temp. °F		Dry Bulb Temp. °F	
Min.	Max.	Min.	Max.
57	72	65	95

#### AIR FLOW DATA – 60 Hz MODELS – 208 Volt

EW-Tech-0308. 123050 Effective 4/16/08. Revised 1/27/09.

Models	Blower Motor Speed	208 Volt									
		CFM <sup>1</sup> @ External Static Pressure - IWC									
		0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
EW(N,W)18	HIGH	900	875	837	799	741	680	608	522	432	333
	LOW	653	643	621	585	540	477	405	324	234	126
EW(N,W)24	HIGH	900	875	837	799	741	680	608	522	432	333
	LOW	653	643	621	585	540	477	405	324	234	126
EW(N,W)30	HIGH	1256	1222	1182	1135	1080	1017	945	878	792	716
	LOW	986	975	956	931	900	864	819	765	711	648
EW(N,W)36	HIGH	1256	1222	1182	1135	1080	1017	945	878	792	716
	LOW	986	975	956	931	900	864	819	765	711	648

1. Includes return air filter and coil.

All air handlers units are ETL Listed up to 0.50" W.C. external static pressure, including air filter, wet coil and largest KW size heater, unless otherwise noted.

#### AIR FLOW DATA – 60 Hz MODELS – 230 Volt

Models	Blower Motor Speed	230 Volt									
		CFM <sup>1</sup> @ External Static Pressure - IWC									
		0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00
EW(N,W)18	HIGH	1000	972	930	888	823	755	675	580	480	370
	LOW	725	714	690	650	600	530	450	360	260	140
EW(N,W)24	HIGH	1000	972	930	888	823	755	675	580	480	370
	LOW	725	714	690	650	600	530	450	360	260	140
EW(N,W)30	HIGH	1396	1358	1313	1261	1200	1130	1050	975	880	795
	LOW	1095	1083	1062	1034	1000	960	910	850	790	720
EW(N,W)36	HIGH	1396	1358	1313	1261	1200	1130	1050	975	880	795
	LOW	1095	1083	1062	1034	1000	960	910	850	790	720

1. Includes return air filter and coil.

All air handlers units are ETL Listed up to 0.50" W.C. external static pressure, including air filter, wet coil and largest KW size heater, unless otherwise note.

#### APPLICATION FACTORS – RATED CFM VS. ACTUAL CFM

% of Rated Airflow	80%	90%	Rated CFM	110%	120%
Capacity Factor	0.96	0.98	1.00	1.02	1.03

#### PHYSICAL & ELECTRICAL DATA

Models	EW(N,W)18		EW(N,W)24		EW(N,W)30		EW(N,W)36		
Blower – Diameter x Width	9 x 6		9 x 6		10 x 8		10 x 8		
Motor	HP	1/5		1/5		1/3		1/3	
	Nominal RPM	1075		1075		1075		1075	
Voltage	208/230								
Amps	Full Load	1.6/1.8		1.6/1.8		2.4/2.6		2.4/2.6	
Filter <sup>1</sup>	Type	Disposable							
	Size	20 x 20 x 1							
Ship Weight (lbs.)	90		90		102		102		

1. Factory supplied.

#### ELECTRICAL DATA – COOLING ONLY (60 Hz)

Models	Total Motor Amps		Minimum Circuit Ampacity		Max. O.C.P. <sup>1</sup> Amps/Type	Minimum Wire Size A.W.G.
	60 Hz		60 Hz			
	208V	230V	208V	230V		
EW(N,W)18	1.4	1.8	1.8	2.3	15	14
EW(N,W)24	1.4	1.8	1.8	2.3		
EW(N,W)30	2.0	2.6	2.5	3.3		
EW(N,W)36	2.0	2.6	2.5	3.3		

1. OCP = Over Current Protection device, must be HACR type circuit breaker or time delay fuse.

#### ELECTRICAL DATA – 208/230-1-60

Models	Heater Models*	Max. Static	Motor Speed Tap	Total Heat <sup>1</sup>			
				kW		MBTUH	
				208V	240V	208V	240V
EW(N,W)18	S1-EK0603211	.5	LO	2.25	3	7.7	10.3
	S1-EK0605211			3.8	5	13	17
	S1-EK0608211			6	8	20.5	27.3
	S1-EK0610211			7.5	10	25.6	34.1

EW(N,W)24	S1-EK0603211		HI	2.25	3	7.7	10.3
	S1-EK0605211			3.8	5	13	17
	S1-EK0608211			6	8	20.5	27.3
	S1-EK0610211			7.5	10	25.6	34.1
EW(N,W)30	S1-EK0603211		LO	2.25	3	7.7	10.3
	S1-EK0605211			3.8	5	13	17
	S1-EK0608211			6	8	20.5	27.3
	S1-EK0610211			7.5	10	25.6	34.1
EW(N,W)36	S1-EK0603211		HI	2.25	3	7.7	10.3
	S1-EK0605211			3.8	5	13	17
	S1-EK0608211			6	8	20.5	27.3
	S1-EK0610211			7.5	10	25.6	34.1

1. See conversion table below.

\* May be 0 (no breaker) or 1 (with breaker)

**kW & MBH CONVERSIONS – FOR TOTAL POWER INPUT REQUIREMENT**

FOR	208V	OPERATION MULTIPLY	240V	TABULATED kW & MBH BY	.751
	230V		240V		.918

**ELECTRICAL DATA (FOR SINGLE SOURCE POWER SUPPLY) – COPPER WIRE 208/230-1-60**

Models	Heater Models*	Heater Amps 240V	Field Wiring					
			Min. Circuit Amp		Max, O.C.P. <sup>1</sup> Amps/Type		75° C Wire Size - AWG	
			208V	240V	208V	240V	208V	240V
EW(N,W)18	S1-EK0603211	12.5	15.6	17.9	20	20	12	12
	S1-EK0605211	20.8	24.6	28.3	25	30	10	10
	S1-EK0608211	33.3	38.1	43.9	40	45	8	8
	S1-EK0610211	41.7	47.1	54.3	50	60	8	6
EW(N,W)24	S1-EK0603211	12.5	15.6	17.9	20	20	12	12
	S1-EK0605211	20.8	24.6	28.3	25	30	10	10
	S1-EK0608211	33.3	38.1	43.9	40	45	8	8
	S1-EK0610211	41.7	47.1	54.3	50	60	8	6
EW(N,W)30	S1-EK0603211	12.5	16.5	18.9	20	20	12	12
	S1-EK0605211	20.8	25.5	29.3	25	30	10	10
	S1-EK0608211	33.3	39.0	44.9	40	45	8	8
	S1-EK0610211	41.7	48.0	55.3	50	60	8	6
EW(N,W)36	S1-EK0603211	12.5	16.5	18.9	20	20	12	12
	S1-EK0605211	20.8	25.5	29.3	25	30	10	10
	S1-EK0608211	33.3	39.0	44.9	40	45	8	8
	S1-EK0610211	47.7	48.0	55.3	50	60	8	6

1. OCP = Over Current Protection device, must be HACR type circuit breaker or time delay fuse.

\* May be 0 (no breaker) or 1 (with breaker)