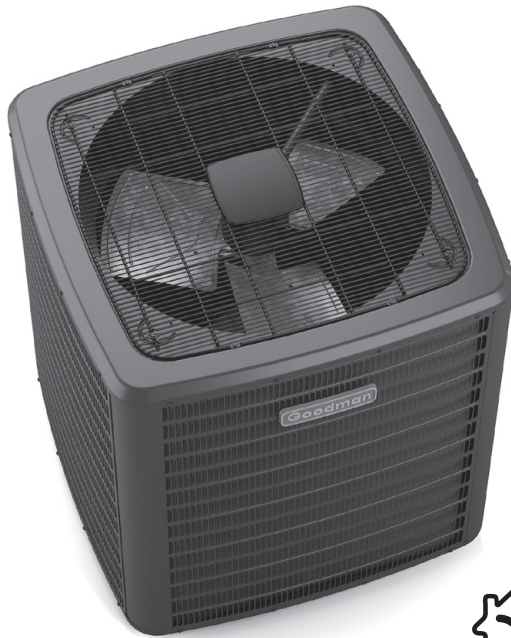


## HIGH-EFFICIENCY, INVERTER DRIVEN SPLIT SYSTEM HEAT PUMP UP TO 22.5 SEER2 & 8.2 HSPF2



### Contents

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### Standard Features

- Variable-speed swing compressors
- High-density compressor sound blanket
- Integrated communicating ComfortBridge™ Technology
- Commissioning and diagnostics via indoor board Bluetooth with the CoolCloud™ phone and tablet application
- Goodman control algorithmic logic
- In communicating mode, only two low-voltage wires to outdoor unit required
- Diagnostic indicator lights, seven-segment LED display, and fault code storage
- Field-selectable boost mode increases compressor speed during unusually high loads
- Quiet DC outdoor fan motor
- Fully charged for 15' of tubing length
- Field-installed bi-flow filter drier
- Coil and ambient temperature sensors
- Suction pressure transducer (in cooling mode)
- Sweat connection service valves with easy access to gauge ports
- AHRI Certified; ETL Listed

### Cabinet Features

- Heavy-gauge galvanized-steel cabinet
- Removable grille-style top design compliant with UL 60335-2-40
- Venturi for increased velocity of airflow
- Custom two-tone gray powder-paint finish
- 500-hour salt-spray tested
- Wire fan discharge grille
- Steel louver coil guard
- Top and side maintenance access
- Single-panel access to controls with space provided for field-installed accessories
- When properly anchored, meets the 2020 Florida Building Code unit integrity requirements for hurricane-type winds (Anchor bracket kits available.)



Products that are recognized as the Most Efficient of ENERGY STAR® in 2023 prevent greenhouse gas emissions by meeting rigorous energy efficiency performance levels set by the U.S. Environmental Protection Agency.

\* Proper sizing and installation of equipment is critical to achieve optimal performance. Split system air conditioners and heat pumps must be matched with appropriate coil components to meet ENERGY STAR criteria. Ask your contractor for details or visit [www.energystar.gov](http://www.energystar.gov).

**LIFETIME  
COMPRESSOR  
LIMITED WARRANTY\***

**10 YEAR  
REPLACEMENT  
LIMITED  
WARRANTY\***

**10 YEAR  
PARTS  
LIMITED  
WARRANTY\***

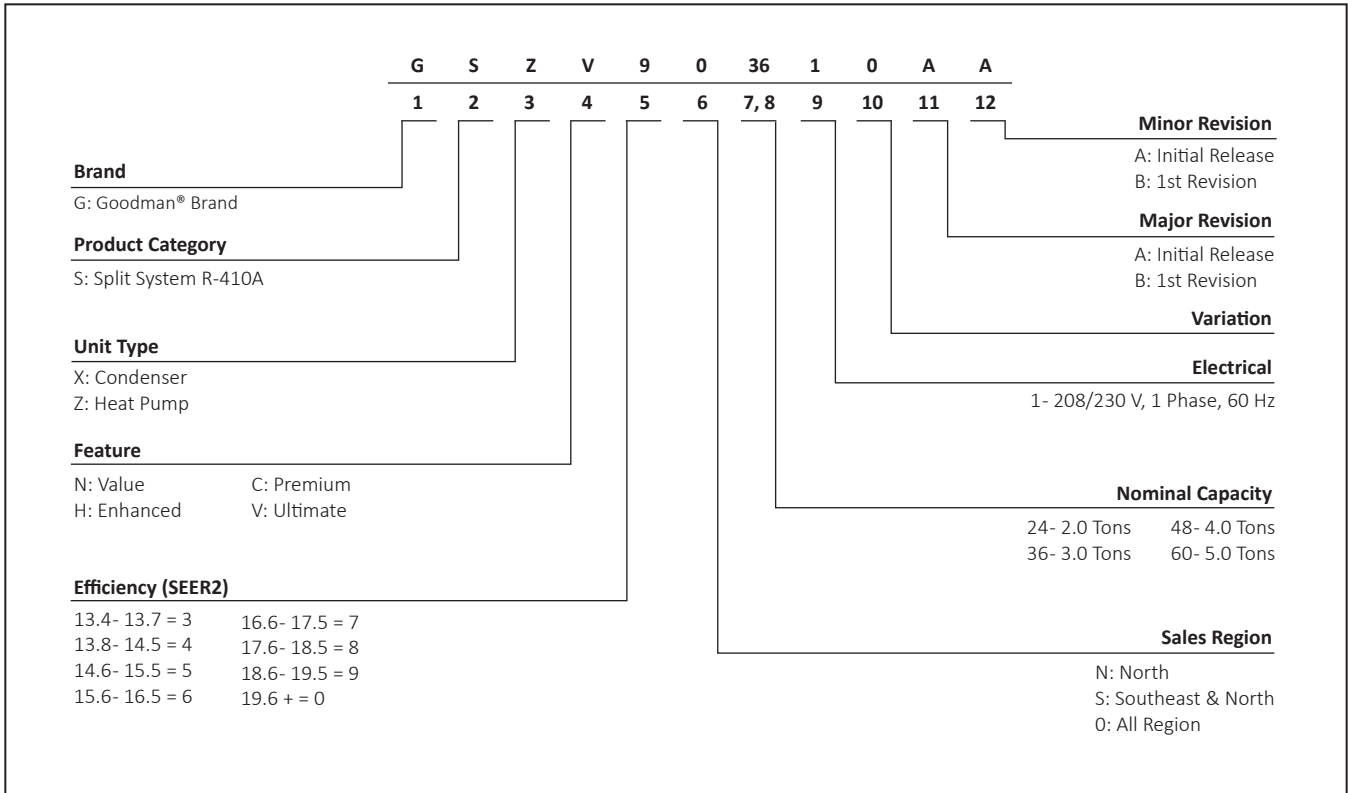





COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL  
= ISO 9001 =

COMPANY WITH  
ENVIRONMENTAL SYSTEM  
CERTIFIED BY DNV GL  
= ISO 14001 =



\* Complete warranty details available from your local dealer or at [www.goodmanmfg.com](http://www.goodmanmfg.com). To receive the Lifetime Compressor Limited Warranty (good for as long as you own your home), 10-Year Unit Replacement Limited Warranty and 10-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration is not required in California or Québec. The duration of warranty coverages in Texas differs in some cases.



	GSZV902410A*	GSZV903610A*	GSZV904810A*	GSZV906010A*
<b>CAPACITY AND RATINGS</b>				
Max. Cooling (BTU/h)	23,200	34,200	45,000	52,500
Max. Heating (BTU/h)	23,000	34,200	44,500	52,500
<b>COMPRESSOR</b>				
Type	Swing	Swing	Swing	Swing
RLA	12.7	27.3	27.3	22.8
<b>CONDENSER FAN MOTOR</b>				
Horsepower	1/2	1/2	1/2	1/2
FLA	2.5	2.5	2.5	2.5
<b>REFRIGERATION SYSTEM</b>				
Refrigerant Line Size <sup>1</sup>				
Liquid Line Size ("O.D.)	3/8"	3/8"	3/8"	3/8"
Suction Line Size ("O.D.)	3/4"	7/8"	1 1/8"	1 1/8"
Refrigerant Connection Size				
Liquid Valve Size ("O.D.)	3/8"	3/8"	3/8"	3/8"
Suction Valve Size ("O.D.)	3/4"	7/8"	7/8"	7/8"
Valve Connection Type	Ball Valve	Ball Valve	Ball Valve	Ball Valve
Refrigerant Charge	165	272	272	272
Superheat at Service Valve	7-9°F	7-9°F	7-9°F	7-9°F
Subcooling at Service Valve	7-9°F	7-9°F	7-9°F	9-11°F
<b>ELECTRICAL DATA</b>				
Voltage/Phase (60 Hz)	208-230/1	208-230/1	208-230/1	208-230/1
Minimum Circuit Ampacity <sup>2</sup>	15.2	29.8	29.8	30.6
Max. Overcurrent Protection <sup>3</sup>	20	30	30	35
Min / Max Volts	197/253	197/253	197/253	197/253
Electrical Conduit Size	1/2" or 3/4"	1/2" or 3/4"	1/2" or 3/4"	1/2" or 3/4"
<b>EQUIPMENT WEIGHT (LBS)</b>	217	291	291	291
<b>SHIP WEIGHT (LBS)</b>	243	318	318	318
<b>ENERGY STAR® CERTIFIED <sup>^</sup></b>				NO

**^ ENERGY STAR NOTES**

- Products that are recognized as the Most Efficient of ENERGY STAR® in 2023 prevent greenhouse gas emissions by meeting rigorous energy efficiency performance levels set by the U.S. Environmental Protection Agency.
- Proper sizing and installation of equipment is critical to achieving optimal performance. Split system air conditioners and heat pumps must be matched with appropriate coil components to meet ENERGY STAR® criteria. Ask your contractor for details or visit [www.energystar.gov](http://www.energystar.gov).
- The [www.energystar.gov](http://www.energystar.gov) website provides up-to-date system combinations certified to meet ENERGY STAR® requirements.

<sup>1</sup> Tested and rated in accordance with AHRI Standard 210/240

<sup>2</sup> Wire size should be determined in accordance with National Electrical Codes; extensive wire runs will require larger wire sizes

<sup>3</sup> Must use time-delay fuses or HACR-type circuit breakers of the same size as noted.

**NOTES**

- Always check the S&R plate for electrical data on the unit being installed.
- Installer will need to supply 7/8" to 1 1/8" adapters for suction line connections.
- Unit is charged with refrigerant for 15' of 3/8" liquid line. System charge must be adjusted per Installation Instructions Final Charge Procedure.







EXPANDED COOLING DATA — GSZV903610A\* / CA\*F3743\*6D\* + MBVC1601\*\* - 1A\* + TXV (HIGH STAGE)

Table with columns: IDB\*, AIRFLOW, Outdoor Ambient Temperature (65°F, 75°F, 85°F, 95°F, 105°F, 115°F), and Entering Indoor Wet Bulb Temperature (59, 63, 67, 71, 75, 79, 83, 87, 91, 95, 99, 103, 107, 111, 115). Rows are organized by IDB\* (1050, 1160, 1350, 85) and include various metrics like MBh, S/T, ΔT, kW, Amps, and Hi/Lo PR.

kW = Total system power  
Amps = outdoor unit amps

Shaded area reflects AHRI conditions

IDB\*: Entering Indoor Dry Bulb Temperature  
High and low pressures are measured at the liquid and suction service valves.  
Airflow may vary depending on actual ambient conditions and system operation modes.











EXPANDED HEATING DATA — HIGH STAGE

GSZV902410A\* / CA\*F3137\*6A\* + MBVC1201\*\*-1A\*+TXV

	OUTDOOR AMBIENT TEMPERATURE																	
	65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
MBh	29.5	27.7	25.9	24.1	23.2	22.2	20.1	21.3	18.9	17.5	16.4	16.1	15.6	14.4	13.1	10.3	8.9	7.1
T/R	37	35	33	31	30	29	26	27	24	22	21	21	20	18	17	13	11	9
kW	2.03	1.97	1.91	1.85	1.82	1.80	1.74	2.01	1.91	1.86	1.85	1.82	1.74	1.70	1.68	1.56	1.51	1.39
Amps	7.7	7.4	7.2	6.9	6.8	6.7	6.4	8.4	7.9	7.7	7.7	7.5	7.2	6.8	6.2	6.4	6.2	5.7
COP	4.09	3.94	3.79	3.64	3.53	3.44	3.21	3.10	2.90	2.75	2.60	2.45	2.36	2.25	2.20	1.93	1.72	1.50
HI PR	430	416	402	388	380	374	360	360	346	331	316	308	302	287	273	258	244	229
LO PR	133	125	117	108	103	100	92	129	116	104	91	83	78	65	52	39	27	14

GSZV903610A\* / CA\*F3743\*6D\* + MBVC1601\*\*-1A\*+TXV

	OUTDOOR AMBIENT TEMPERATURE																	
	65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
MBh	43.4	40.8	38.3	35.8	34.2	33.0	30.1	39.2	36.3	33.5	30.9	29.2	28.1	26.9	24.4	19.6	16.8	13.8
T/R	33	32	30	28	27	26	24	31	29	26	24	23	22	21	20	15	13	11
kW	2.74	2.69	2.63	2.57	2.54	2.52	2.46	4.18	4.08	3.98	3.88	3.83	3.79	3.80	3.97	3.50	3.40	3.30
Amps	10.1	9.8	9.6	9.4	9.2	9.1	8.9	16.9	16.4	16.0	15.6	15.3	15.2	14.7	15.4	13.9	13.5	13.1
COP	4.29	4.11	3.92	3.73	3.60	3.49	3.24	2.75	2.65	2.51	2.37	2.27	2.21	2.08	1.85	1.67	1.46	1.24
HI PR	374	362	349	337	330	325	313	346	332	318	304	296	290	276	262	248	234	220
LO PR	156	146	136	127	121	117	107	141	127	113	99	91	85	71	57	43	29	15

GSZV904810A\* / CA\*F4961\*6D\* + MBVC2001\*\*-1A\*+TXV

	OUTDOOR AMBIENT TEMPERATURE																	
	65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
MBh	57.2	53.6	50.2	46.7	44.5	42.9	38.8	45.5	42.4	39.1	36.0	34.0	32.8	29.4	25.4	22.7	19.4	15.9
T/R	35	33	32	30	29	28	25	29	27	25	23	22	21	19	17	15	12	10
kW	3.74	3.65	3.55	3.45	3.39	3.36	3.26	4.58	4.47	4.35	4.23	4.16	4.11	3.99	4.05	3.76	3.64	3.52
Amps	14.0	13.6	13.1	12.7	12.5	12.3	11.9	18.7	18.2	17.7	17.2	16.9	16.7	16.2	15.3	15.2	14.6	14.1
COP	4.14	3.97	3.80	3.63	3.50	3.41	3.15	2.91	2.79	2.64	2.50	2.40	2.34	2.16	1.82	1.77	1.56	1.32
HI PR	379	367	355	342	335	330	318	346	332	318	304	296	290	276	262	248	234	220
LO PR	140	131	123	114	109	105	97	105	95	84	74	67	63	53	42	32	22	11

GSZV906010A\* / CA\*F4961\*6D\* + MBVC2001\*\*-1A\*+TXV

	OUTDOOR AMBIENT TEMPERATURE																	
	65	60	55	50	47	45	40	35	30	25	20	17	15	10	5	0	-5	-10
MBh	66.1	62.3	58.6	54.9	52.5	50.8	46.6	47.7	43.6	40.7	38.5	37.4	35.9	32.1	29.0	24.6	20.8	17.1
T/R	36	34	33	31	30	29	26	27	25	23	22	21	20	18	16	14	12	10
kW	4.55	4.45	4.36	4.26	4.21	4.17	4.07	4.97	4.83	4.70	4.57	4.48	4.43	4.30	4.20	4.03	3.89	3.76
Amps	17.2	16.8	16.4	15.9	15.7	15.5	15.1	19.0	18.4	17.8	17.2	16.9	16.6	16.0	15.7	14.9	14.3	13.7
COP	4.10	3.94	3.78	3.61	3.50	3.41	3.19	2.81	2.65	2.54	2.47	2.44	2.37	2.19	2.00	1.79	1.57	1.33
HI PR	387	375	362	350	342	337	324	337	324	310	296	288	283	269	256	242	228	215
LO PR	138	130	121	113	107	104	95	105	95	84	74	67	63	53	42	32	22	11

High pressure is measured at the suction service valve ( the larger valve).

Low pressure is measured at the gauge port connection.

Amps = Outdoor unit amps (comp.+fan)

Calculations are based on 70 °F indoor dry bulb.

kW = Total system power

Shaded area is AHRI Rating Conditions at 47°F outdoor ambient temperature.

PERFORMANCE DATA FOR STANDARD OPERATING MODE

GSZV902410A* / CA*F3137*6A* + MBVC1201**-1A*+TXV DESIGN SUBCOOLING @ AHRI 95 °F CONDITIONS, 7-9 °F AT THE SERV. VLV. - 100% DEMAND				
OUTDOOR TEMP °F	TOTAL BTU/H	SENSIBLE BTU/H	LATENT BTU/H	TOTAL WATTS
75°	24,300	17,000	7,300	1,670
80°	24,000	17,200	6,800	1,725
85°	23,700	17,300	6,400	1,780
90°	23,500	17,400	6,100	1,855
<b>95°</b>	<b>23,200</b>	<b>17,400</b>	<b>5,800</b>	<b>1,930</b>
100°	22,600	17,200	5,400	1,945
105°	22,000	16,900	5,100	1,960
110°	21,200	16,800	4,400	1,995
115°	20,300	16,700	3,600	2,030
TVA Conditions @ 95° OD DB, 75° ID, 63° ID WB				
95°	21,400	16,300	5,100	1,800

GSZV904810A* / CA*F4961*6D* + MBVC2001**-1A*+TXV DESIGN SUBCOOLING @ AHRI 95 °F CONDITIONS, 7-9 °F AT THE SERV. VLV. - 100% DEMAND				
Outdoor Temp °F	Total BTU/h	Sensible BTU/h	Latent BTU/h	Total Watts
75°	48,300	35,300	13,000	3,280
80°	47,700	35,300	12,400	3,385
85°	47,100	35,300	11,800	3,490
90°	46,100	35,000	11,100	3,620
<b>95°</b>	<b>45,000</b>	<b>34,700</b>	<b>10,300</b>	<b>3,750</b>
100°	43,800	34,200	9,600	3,790
105°	42,500	33,600	8,900	3,830
110°	41,400	33,700	7,700	3,900
115°	40,200	33,800	6,400	3,970
TVA Conditions @ 95° OD DB, 75° ID, 63° ID WB				
95°	42,800	33,400	9,400	3,530

GSZV903610A* / CA*F3743*6D* + MBVC1601**-1A*+TXV DESIGN SUBCOOLING @ AHRI 95 °F CONDITIONS, 7-9 °F AT THE SERV. VLV. - 100% DEMAND				
OUTDOOR TEMP °F	TOTAL BTU/H	SENSIBLE BTU/H	LATENT BTU/H	TOTAL WATTS
75°	36,700	26,800	9,900	2,240
80°	36,300	26,900	9,400	2,385
85°	35,800	26,900	8,900	2,530
90°	35,000	26,600	8,400	2,690
<b>95°</b>	<b>34,200</b>	<b>26,300</b>	<b>7,900</b>	<b>2,850</b>
100°	33,300	26,100	7,200	3,030
105°	32,300	25,800	6,500	3,210
110°	31,400	25,900	5,500	3,415
115°	30,500	25,900	4,600	3,620
TVA Conditions @ 95° OD DB, 75° ID, 63° ID WB				
95°	33,000	26,100	6,900	2,850

GSZV906010A* / CA*F4961*6D* + MBVC2001**-1A*+TXV DESIGN SUBCOOLING @ AHRI 95 °F CONDITIONS, 9-11 °F AT THE SERV. VLV. - 100% DEMAND				
Outdoor Temp °F	Total BTU/h	Sensible BTU/h	Latent BTU/h	Total Watts
75°	55,800	39,600	16,200	3,890
80°	55,100	39,700	15,400	4,145
85°	54,400	39,700	14,700	4,400
90°	53,500	39,600	13,900	4,700
<b>95°</b>	<b>52,500</b>	<b>39,400</b>	<b>13,100</b>	<b>5,000</b>
100°	50,800	38,600	12,200	5,285
105°	49,100	37,800	11,300	5,570
110°	47,800	37,900	9,900	5,930
115°	46,400	38,000	8,400	6,290
TVA Conditions @ 95° OD DB, 75° ID, 63° ID WB				
95°	50,100	38,100	12,000	4,960

PERFORMANCE DATA FOR FIELD-SELECTABLE BOOST MODE

**GSZV902410A\* / CA\*F3137\*6A\* + MBVC1201\*\*-1A\*+TXV**  
**DESIGN SUBCOOLING @ AHRI 95 °F CONDITIONS, 7-9 °F @ THE SERV.**  
**Vlv. - BOOST MODE**

OUTDOOR TEMP °F	TOTAL BTU/H	SENSIBLE BTU/H	LATENT BTU/H	TOTAL WATTS
75°	25,700	17,700	8,000	1,700
80°	25,400	17,800	7,600	1,800
85°	25,100	17,800	7,300	1,900
90°	24,600	17,700	6,900	2,000
<b>95°</b>	<b>24,000</b>	<b>17,500</b>	<b>6,500</b>	<b>2,150</b>
100°	23,400	17,300	6,100	2,300
105°	22,700	17,000	5,700	2,450
110°	21,400	15,700	5,700	2,400
115°	21,600	15,800	5,800	2,200
<b>TVA Conditions @ 95° OD DB, 75° ID, 63° ID WB</b>				
<b>95°</b>	<b>23,100</b>	<b>17,100</b>	<b>6,000</b>	<b>2,100</b>

**GSZV904810A\* / CA\*F4961\*6D\* + MBVC2001\*\*-1A\*+TXV**  
**DESIGN SUBCOOLING @ AHRI 95 °F CONDITIONS, 7-9 °F @ THE SERV.**  
**Vlv. - BOOST MODE**

OUTDOOR TEMP °F	TOTAL BTU/H	SENSIBLE BTU/H	LATENT BTU/H	TOTAL WATTS
75°	51,500	36,600	14,900	3,250
80°	50,900	36,600	14,300	3,500
85°	50,200	36,600	13,600	3,700
90°	49,100	36,300	12,800	3,900
<b>95°</b>	<b>48,000</b>	<b>36,000</b>	<b>12,000</b>	<b>4,150</b>
100°	46,700	35,500	11,200	4,400
105°	45,300	34,900	10,400	4,650
110°	44,800	33,200	11,600	4,800
115°	41,700	30,900	10,800	4,300
<b>TVA Conditions @ 95° OD DB, 75° ID, 63° ID WB</b>				
<b>95°</b>	<b>46,000</b>	<b>35,200</b>	<b>10,800</b>	<b>4,100</b>

**GSZV903610A\* / CA\*F3743\*6D\* + MBVC1601\*\*-1A\*+TXV**  
**DESIGN SUBCOOLING @ AHRI 95 °F CONDITIONS, 7-9 °F @ THE SERV.**  
**Vlv. - BOOST MODE**

OUTDOOR TEMP °F	TOTAL BTU/H	SENSIBLE BTU/H	LATENT BTU/H	TOTAL WATTS
75°	38,600	27,800	10,800	2,250
80°	38,100	27,800	10,300	2,400
85°	37,600	27,800	9,800	2,550
90°	36,800	27,600	9,200	2,700
<b>95°</b>	<b>36,000</b>	<b>27,400</b>	<b>8,600</b>	<b>2,850</b>
100°	35,000	27,000	8,000	3,000
105°	34,000	26,500	7,500	3,200
110°	33,100	26,600	6,500	3,400
115°	31,700	24,100	7,600	3,300
<b>TVA Conditions @ 95° OD DB, 75° ID, 63° ID WB</b>				
<b>95°</b>	<b>34,600</b>	<b>27,000</b>	<b>7,600</b>	<b>2,700</b>

**GSZV906010A\* / CA\*F4961\*6D\* + MBVC2001\*\*-1A\*+TXV**  
**DESIGN SUBCOOLING @ AHRI 95 °F CONDITIONS, 9-11 °F @ THE SERV.**  
**Vlv. - BOOST MODE**

OUTDOOR TEMP °F	TOTAL BTU/H	SENSIBLE BTU/H	LATENT BTU/H	TOTAL WATTS
75°	61,100	42,200	18,900	4,400
80°	60,400	42,300	18,100	4,700
85°	59,600	42,300	17,300	5,000
90°	58,300	42,000	16,300	5,300
<b>95°</b>	<b>57,000</b>	<b>41,600</b>	<b>15,400</b>	<b>5,600</b>
100°	55,400	41,000	14,400	6,000
105°	54,000	39,500	14,500	6,100
110°	52,200	38,200	14,000	6,400
115°	50,300	36,800	13,500	6,700
<b>TVA Conditions @ 95° OD DB, 75° ID, 63° ID WB</b>				
<b>95°</b>	<b>55,000</b>	<b>40,700</b>	<b>14,300</b>	<b>5,500</b>

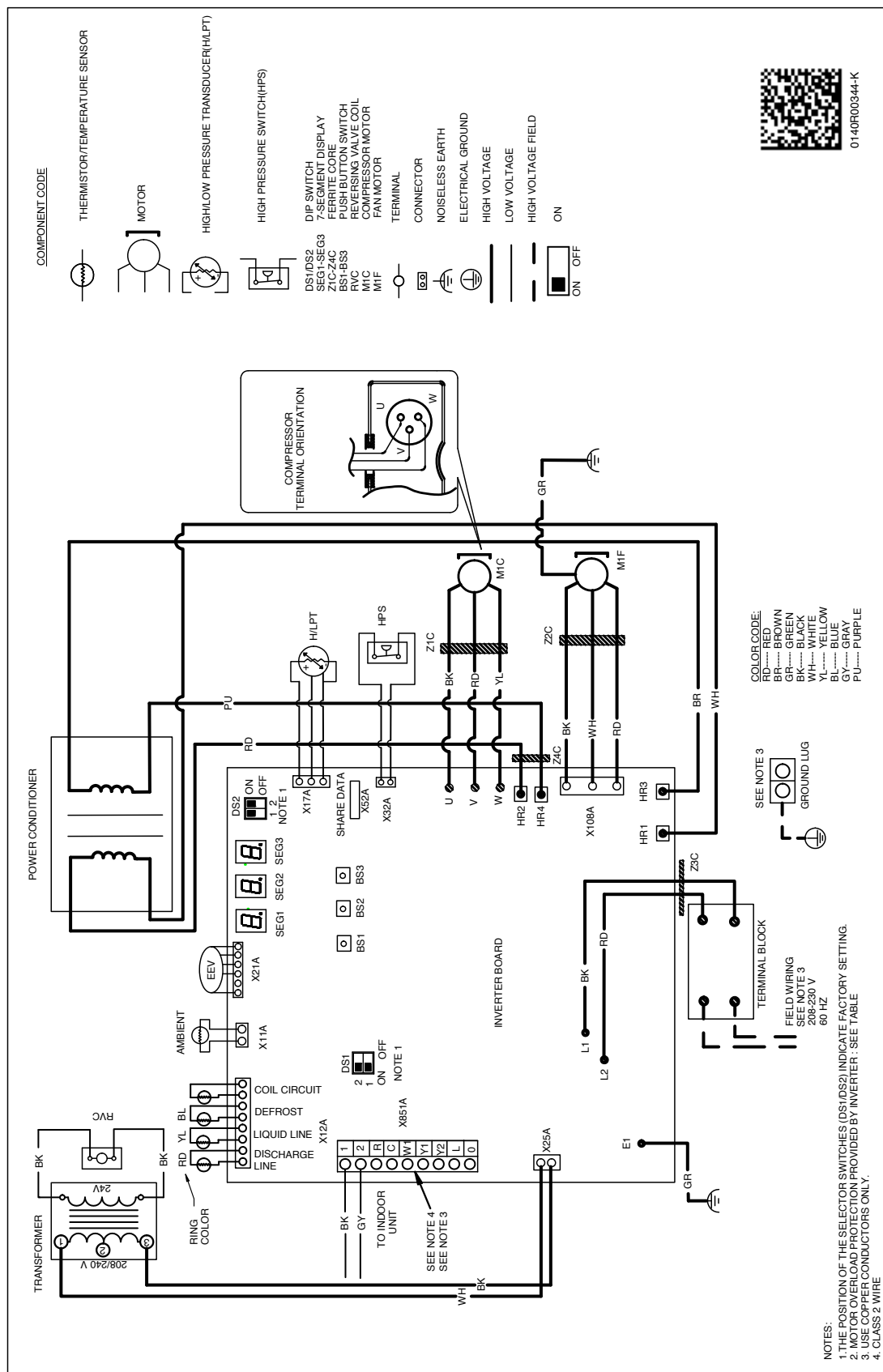
COOLING MODE

TONNAGE	SPEED	TOTAL UNIT SOUND RATING (DBA)	OCTAVE BAND SPECTRUM FREQUENCY (Hz) ANALYSIS (dB)						
			125	250	500	1000	2000	4000	8000
2-Ton	Maximum	68	45.6	53.6	62.5	62.2	62.0	57.5	50.9
3-Ton	Maximum	70	51.4	61.7	63.3	63.5	63.8	61.3	51.8
4-Ton	Maximum	75	57.5	61.4	68.2	69.4	68.4	63.4	52.3
5-Ton	Maximum	75	55.2	61.2	69.8	69.2	68.6	65.7	56.9

HEATING MODE

TONNAGE	SPEED	TOTAL UNIT SOUND RATING (DBA)	OCTAVE BAND SPECTRUM FREQUENCY (Hz) ANALYSIS (dB)						
			125	250	500	1000	2000	4000	8000
2-Ton	Maximum	72	54.4	60.6	67.5	65.3	64.4	63.3	51.6
3-Ton	Maximum	72	53.8	57.5	66.1	66.0	64.0	61.1	51.8
4-Ton	Maximum	76	57.0	67.1	68.4	71.2	69.0	66.0	53.5
5-Ton	Maximum	76	55.8	62.6	69.1	71.6	70.3	66.2	55.3

Note: Tested in accordance with AHRI Standard 270.



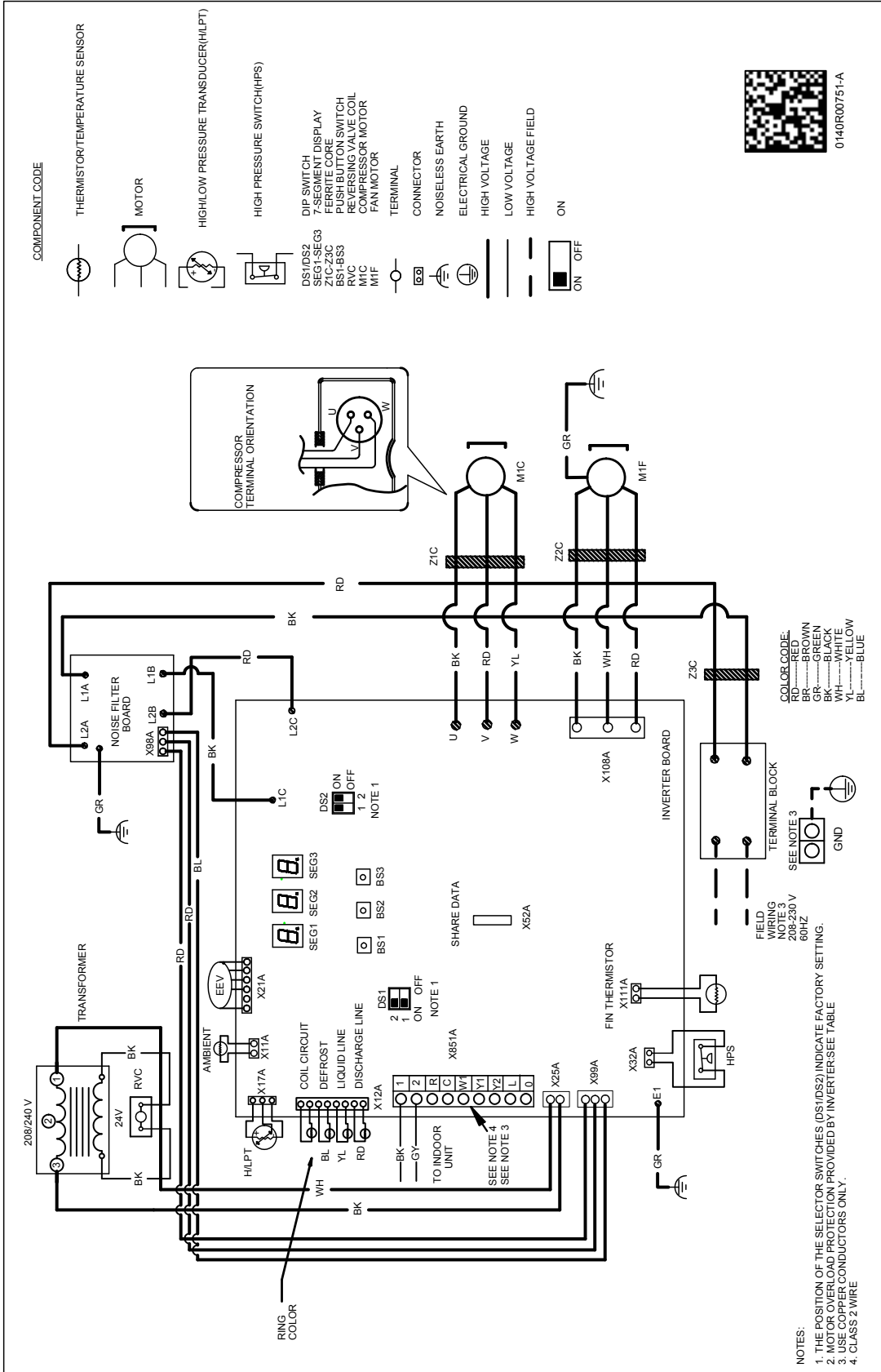
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**WARNING**

**High Voltage:** Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury, or death.

Wiring is subject to change. Always refer to the wiring diagram or the unit for the most up-to-date wiring.

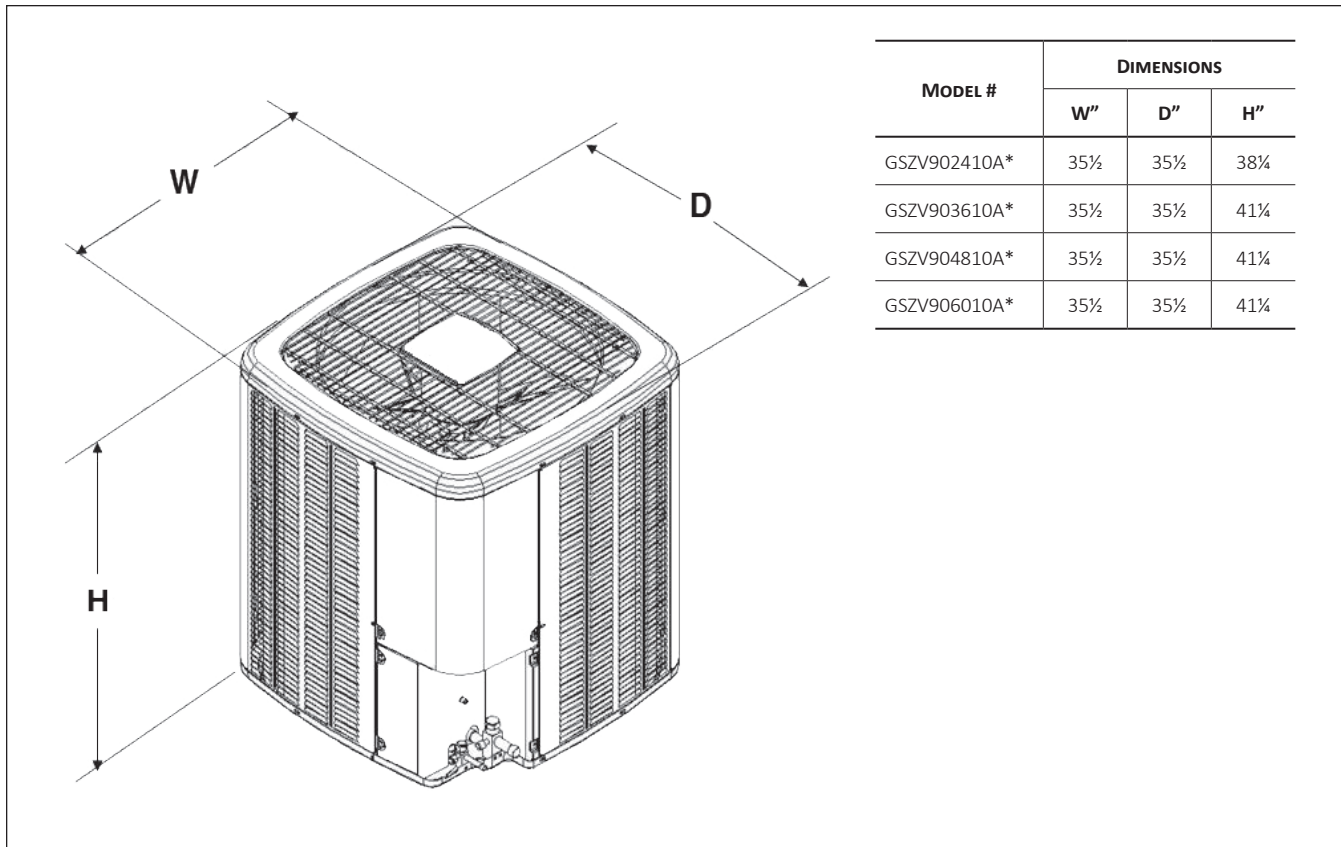




**WARNING**  **High Voltage:** Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury, or death.

Wiring is subject to change. Always refer to the wiring diagram or the unit for the most up-to-date wiring.

## DIMENSIONS



## ACCESSORIES

MODEL	DESCRIPTION	GSZV902410A*	GSZV903610A*	GSZV904810A*	GSZV906010A*
ABK-20	Anchor Bracket Kit <sup>◇</sup>	X	X	X	X
TXV-V24	TXV Kit	X			
TXV-V36	TXV Kit		X		
TXV-V48	TXV Kit			X	
TXV-V60	TXV Kit				X

<sup>◇</sup> Contains 20 brackets; four brackets needed to anchor unit to pad

**All AHRI system ratings are accessible in the System Configurator tool via PartnerLink.**

NOTES

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