Goodman
Air Conditioning & Heating

GRVT96 / GDVT96

HEATING INPUT: 40,000–120,000 BTU/H

TWO-STAGE, VARIABLE-SPEED ECM GAS FURNACE UP TO 97.50% AFUE

Contents

R32 ENERGY STAR ComfortBridge™ technology CoolCloud™

Standard Features

- Integrated communicating ComfortBridge™ Technology
- Commissioning and diagnostics via on board Bluetooth with the CoolCloud phone and tablet application
- Heavy-duty aluminized-steel tubular heat exchanger
- Stainless-steel secondary heat exchanger
- Two-stage gas valve provides quiet, economical heating
- Durable Silicon Nitride igniter
- Quiet two-speed induced draft blower
- Compatible with any single-stage thermostat
- Self-diagnostic control board with constant memory fault code history output to a triple 7-segment display
- Color-coded low-voltage terminals with provisions for electronic air cleaner
- Efficient and quiet variable-speed airflow system gently ramps up or down according to heating or cooling demand
- Multiple continuous fan speed options offer quiet air circulation
- Auto-Comfort and enhanced dehumidification modes available
- All models comply with California 40 ng/J Low NOx emissions standard
- Can no longer be installed in California's South Coast Air Quality Management District (SCAQMD) on or after October 1, 2019.

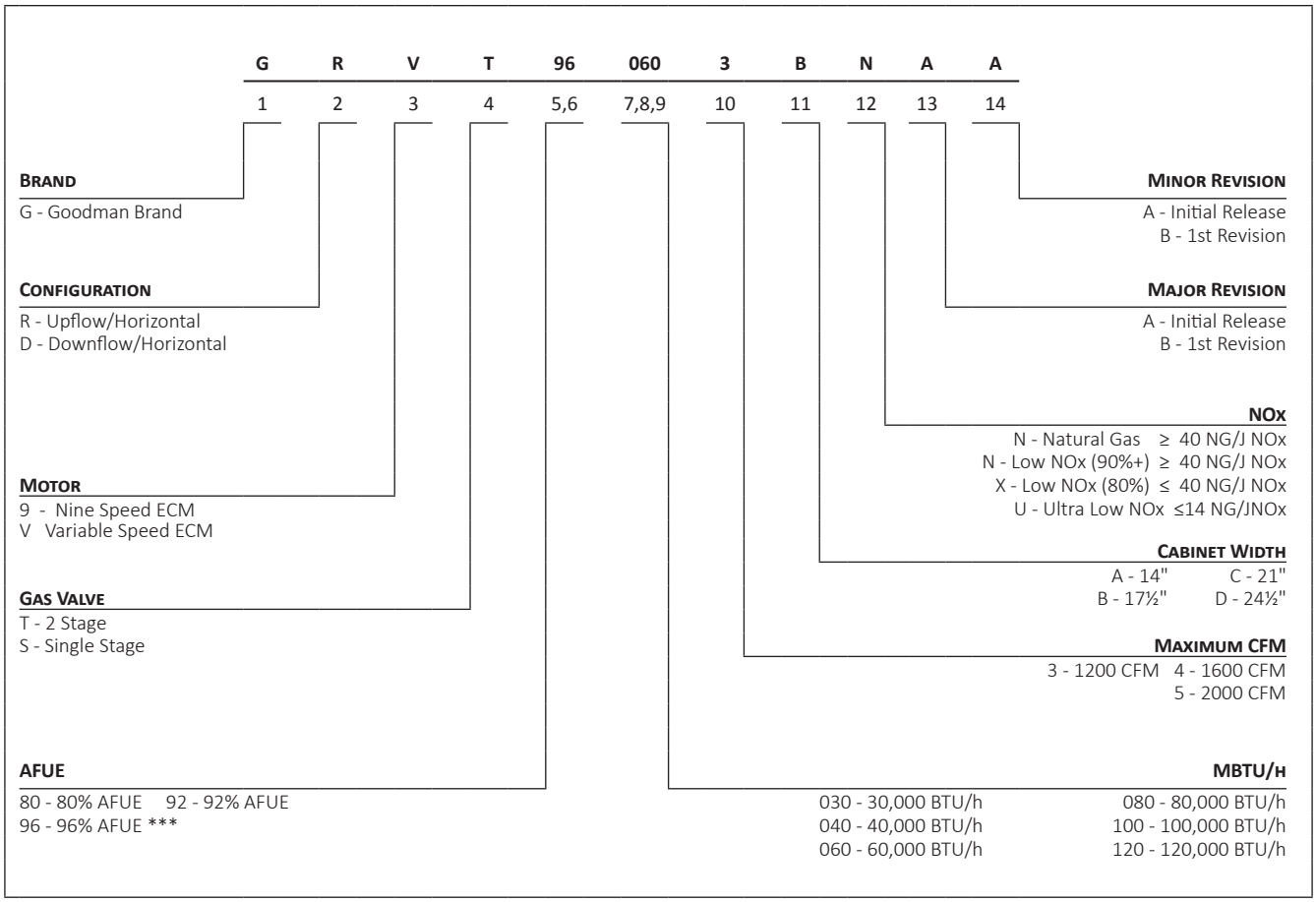
Cabinet Features

- Designed for multi-position installation — upflow, horizontal left or right
- Certified for direct vent (2-pipe) or non-direct vent (1-pipe)
- Easy to install top venting with optional side venting
- Convenient left or right connection for gas and electrical service
- Cabinet air leakage (Q_{Leak}) ≤ 2%
- Heavy-gauge steel cabinet with durable baked-enamel finish
- Fully insulated heat exchanger and blower section
- Airtight solid bottom or side-return with easy-cut tabs for effortless removal in bottom air-inlet applications

LIFETIME HEAT EXCHANGER LIMITED WARRANTY* | 10 YEAR UNIT REPLACEMENT LIMITED WARRANTY* | 10 YEAR PARTS LIMITED WARRANTY*

Intertek AHRI CERTIFIED COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV GL = ISO 9001 = COMPANY WITH ENVIRONMENTAL SYSTEM CERTIFIED BY DNV GL = ISO 14001 = BBB ACCREDITED BUSINESS

* Complete warranty details available from your local dealer or at www.goodmanmfg.com. To receive the Lifetime Heat Exchanger 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 and some of the additional requirements are not required in Florida, California, or Québec. The duration of warranty coverage in Texas and Florida differs in some cases. Other limitations and exclusions apply; refer to complete warranty details for a full list of limitations and exclusions



*** Some models are rated up to 97.50%

	GRVT96 0403BN	GRVT96 0603BN	GRVT96 0803BN	GRVT96 0804CN	GRVT96 1005CN	GRVT96 1005DN	GRVT96 1205DN
HEATING DATA							
High Fire Input[1]	40,000	60,000	80,000	80,000	100,000	100,000	120,000
High Fire Output[1]	39,000	58,200	76,880	77,600	96,100	97,500	115,320
Low-Fire Input[1]	28,000	42,000	56,000	56,000	70,000	70,000	84,000
Low-Fire Output[1]	27,300	40,740	53,816	54,320	67,270	68,250	80,724
AFUE[2]	97.50	97.00	96.10	97.00	96.10	97.50	96.10
Temperature Rise Range (°F) High	20 - 50	30 - 60	35 - 65	25 - 55	35 - 65	30 - 60	35 - 65
Temperature Rise Range (°F) Low Fire	20 - 50	25 - 55	35 - 65	20 - 50	35 - 65	25 - 55	35 - 65
Vent Diameter[3]	2" - 3"	2" - 3"	2" - 3"	2" - 3"	2" - 3"	2" - 3"	2" - 3"
No. of Burners	2	3	4	4	5	5	6
CIRCULATOR BLOWER							
Available AC @ 0.5" ESP	1.5 - 3	1.5 - 3	1.5 - 3	1.5 - 4	2 - 5	2 - 5	2 - 5
Size (D x W)	10" x 8"	11" x 8"	11" x 8"	11" x 10"	11" x 10"	11" x 11"	11" x 11"
Horsepower @ 1075 RPM	1/2	1/2	1/2	3/4	1	1	1
Speed	VS ECM	VS ECM	VS ECM	VS ECM	VS ECM	VS ECM	VS ECM
FILTER SIZE (IN²) (QTY)	(1) 16 x 25 (side or bottom)	(1) 16 x 25 (side or bottom)	(1) 16 x 25 (Side or Bottom)[6]	(1) 20 x 25 (bottom) or (2) 16 x 25 (side)	(1) 20 x 25 (bottom) or (2) 16 x 25 (side)	(1) 20 x 25 (bottom) or (2) 16 x 25 (side)	(1) 20 x 25 (bottom) or (2) 16 x 25 (side)
ELECTRICAL DATA							
Min. Circuit Ampacity [4]	7.6	7.6	7.6	10.9	13.9	13.9	13.9
Max. Overcurrent Device (amps) [5]	15	15	15	15	20	20	20
SHIPPING WEIGHT (LBS)	114	117	120	141	143	153	156
Potential Eligibility for IRA Tax Credit	✓	✓	NO	✓	NO	✓	NO
ENERGY STAR® Certified	ENERGY STAR	ENERGY STAR	ENERGY STAR	ENERGY STAR	ENERGY STAR	ENERGY STAR	ENERGY STAR

[1] Natural Gas BTU/h; for altitudes 0-4500' above sea level, reduce input rating by 4% for each 1000' above 4500' altitude.

[2] DOE AFUE based upon Isolated Combustion System (ICS)

[3] Vent and combustion air diameters may vary depending upon vent length. Refer to the latest editions of the National Fuel Gas Code NFPA 54/ANSI Z223.1 (in the USA) and the Canada National Standard of Canada, CAN/CSA B149.1 and CAN/CSA B142.2 (in Canada).

[4] Minimum Circuit Ampacity = (1.25 x Circulator Blower Amps) + ID Blower amps. Wire size should be determined in accordance with National Electrical Codes. Extensive wire runs will require larger wire sizes.

[5] Maximum Overcurrent Protection Device refers to maximum recommended fuse or circuit breaker size. May use fuses or HACR-type circuit breakers of the same size as noted.

[6] Recommended to use 2 side ducts with 2 separate 16 x 25 filters or ONE 20 x 25 bottom filter for better mid rise & blower performance.

Notes

- All furnaces are manufactured for use on 115 VAC, 60 Hz, single-phase electrical supply.
- Gas Service Connection ½" FPT
- Important: Size fuses and wires properly and make electrical connections in accordance with the National Electrical Code and/or all existing local codes.
- For bottom return: Failure to unfold flanges may reduce airflow by up to 18%. This could result in performance and noise issues.
- For servicing or cleaning, a 24" front clearance is required. Unit connections (electrical, flue and drain) may necessitate greater clearances than the minimum clearances listed above. In all cases, accessibility clearance must take precedence over clearances from the enclosure where accessibility clearances are greater.

Energy Star Notes

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. The www.energystar.gov website provides up-to-date system combinations certified to meet ENERGY STAR® requirements.

	GDVT96 0403BN	GDVT96 0603BN	GDVT96 0804CN	GDVT96 1005CN	GDVT96 1205DN
Heating Data					
High Fire Input[1]	40,000	60,000	80,000	100,000	120,000
High Fire Output[1]	38,800	58,200	76,880	96,100	115,320
Low-Fire Input[1]	28,000	42,000	56,000	70,000	84,000
Low-Fire Output[1]	27,160	40,740	53,816	67,270	80,724
AFUE[2]	97.00	97.00	96.10	96.10	96.10
Temperature Rise Range (°F) High/Low Fire	20 - 50	25 - 55	35 - 65	35 - 65	35 - 65
Temperature Rise Range (°F) High/Low Fire	20 - 50	20 - 50	35 - 65	35 - 65	35 - 65
Vent Diameter[3]	2" - 3"	2" - 3"	2" - 3"	2" - 3"	2" - 3"
No. of Burners	2	3	4	5	6
Circulator Blower					
Available AC @ 0.5" ESP	1.5 - 3	1.5 - 3	1.5 - 4	2 - 5	2 - 5
Size (D x W)	10" x 8"	11" x 8"	11" x 10"	11" x 10"	11" x 11"
Horsepower @ 1075 RPM	1/2	1/2	3/4	1	1
No. of Speeds	VS ECM	VS ECM	VS ECM	VS ECM	VS ECM
FILTER SIZE (IN²) (QTY)	(2) 10 x 20 or (1) 16 x 25 (top return)	(2) 10 x 20 or (1) 16 x 25 (top return)	(2) 10 x 20 or (1) 16 x 25 (top return)	(1) 14 x 20 (bottom) or (1) 20 x 25 (top return)	(1) 14 x 20 (bottom) or (1) 20 x 25 (top return)
Electrical Data					
Min. Circuit Ampacity [3]	7.6	7.6	10.9	13.9	13.9
Max. Overcurrent Device (amps) [4]	15	15	15	20	20
Shipping Weight (lbs)	116	119	143	145	158
Potential Eligibility for IRA Tax Credit	✓	✓	NO	NO	NO
ENERGY STAR® Certified	ENERGY STAR	ENERGY STAR	ENERGY STAR	ENERGY STAR	ENERGY STAR

[1] Natural Gas BTU/h; for altitudes 0-4500' above sea level, reduce input rating by 4% for each 1000' above 4500' altitude.

[2] DOE AFUE based upon Isolated Combustion System (ICS)

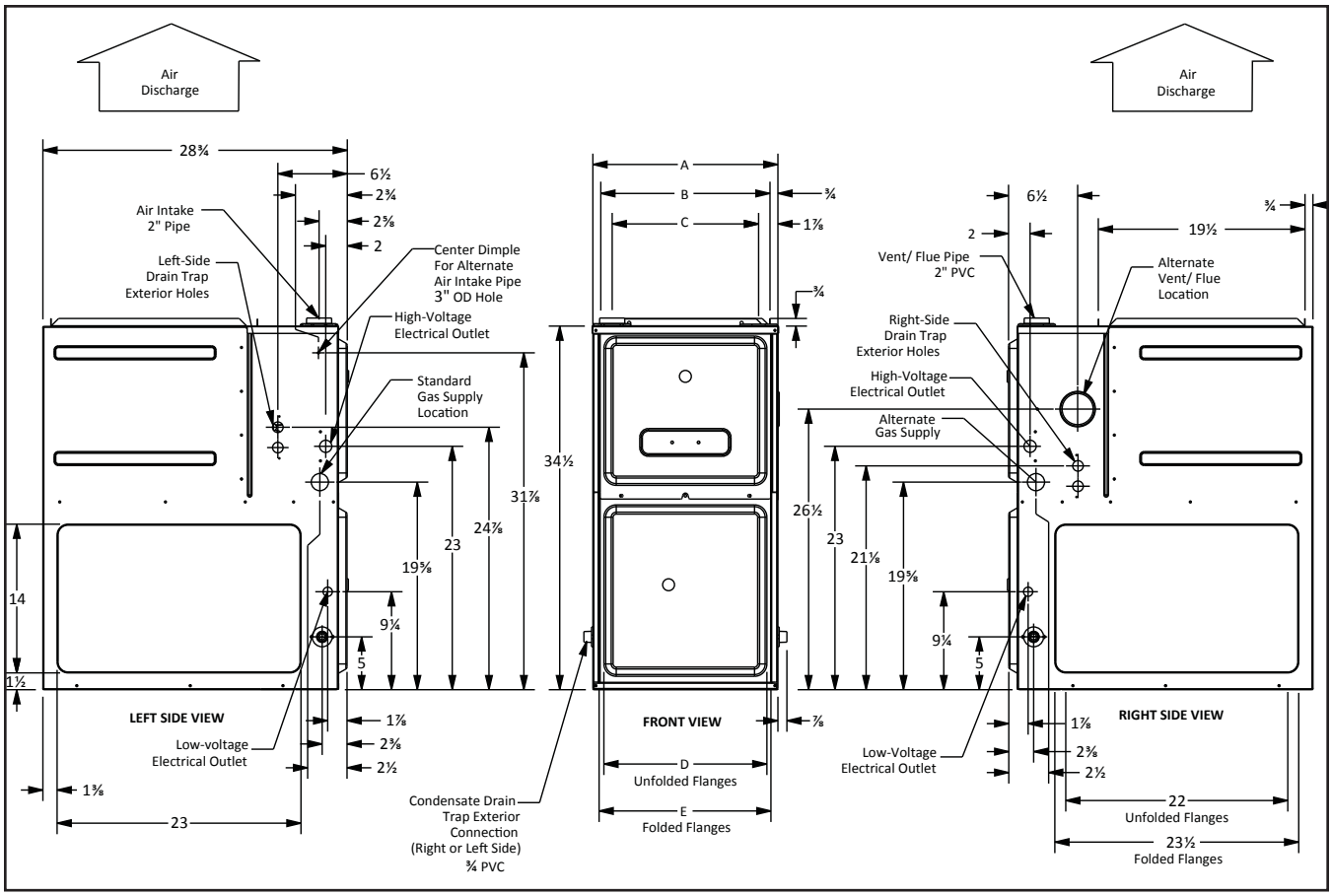
[3] Vent and combustion air diameters may vary depending upon vent length. Refer to the latest editions of the National Fuel Gas Code NFPA 54/ANSI Z223.1 (in the USA) and the Canada

[4] Minimum Circuit Ampacity = (1.25 x Circulator Blower Amps) + ID Blower amps. Wire size should be determined in accordance with National Electrical Codes. Extensive wire runs will require larger wire sizes.

[5] Maximum Overcurrent Protection Device refers to maximum recommended fuse or circuit breaker size. May use fuses or HACR-type circuit breakers of the same size as noted.

Notes

- All furnaces are manufactured for use on 115 VAC, 60 Hz, single-phase electrical supply.
- Gas Service Connection ½" FPT
- Important: Size fuses and wires properly and make electrical connections in accordance with the National Electrical Code and/or all existing local codes.
- For bottom return: Failure to unfold flanges may reduce airflow by up to 18%. This could result in performance and noise issues.
- For servicing or cleaning, a 24" front clearance is required. Unit connections (electrical, flue and drain) may necessitate greater clearances than the minimum clearances listed above. In all cases, accessibility clearance must take precedence over clearances from the enclosure where accessibility clearances are greater.



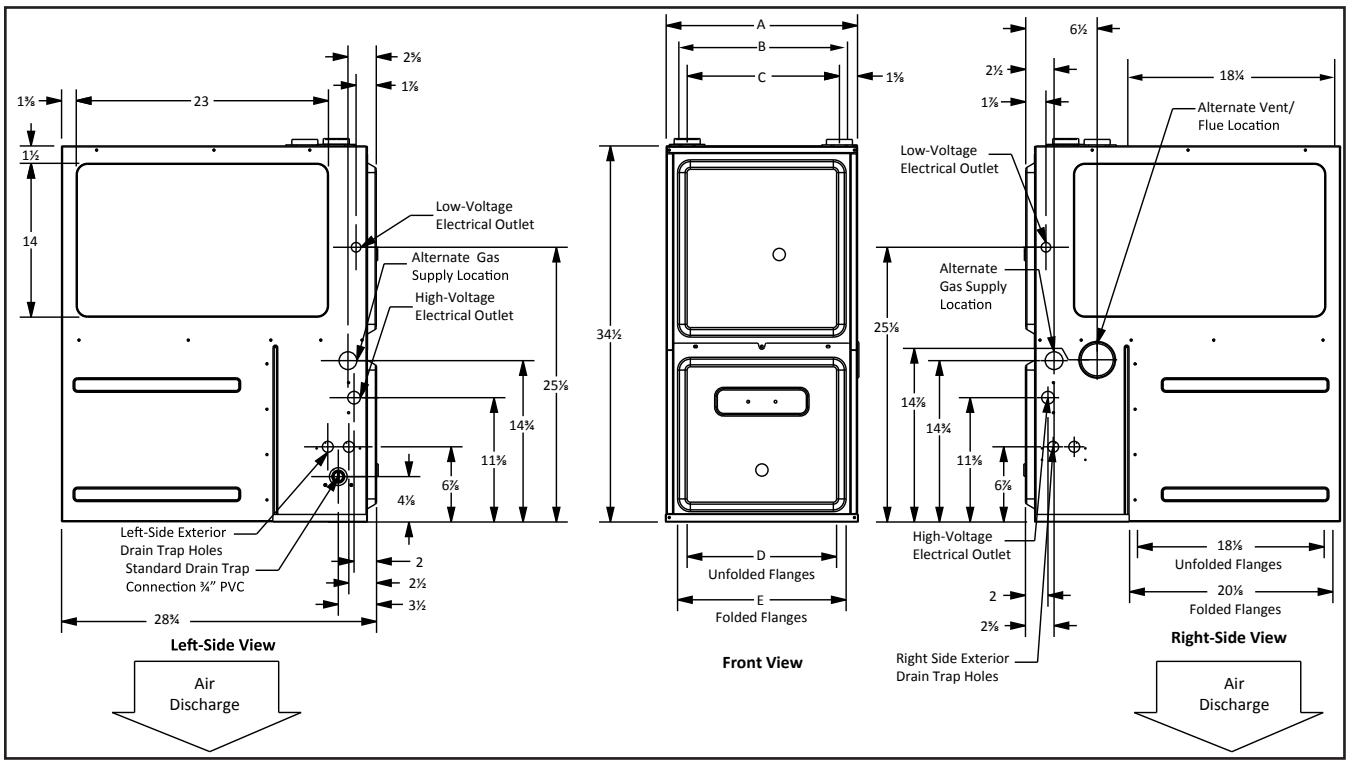
Model	W	D	H
GRVT960403BN	17½”	28⅞"	34½”
GRVT960603BN	17½”	28⅞"	34½”
GRVT960803BN	17½”	28⅞"	34½”
GRVT960804CN	21”	28⅞"	34½”
GRVT961005CN	21”	28⅞"	34½”
GRVT961005DN	24½”	28⅞"	34½”
GRVT961205DN	24½"	28⅞"	34½"

	Air Discharge			Air Return
A	B	C	D	E
17½”	16”	13⅞"	12⅛"	13⅝"
17½”	16”	13⅞"	12⅛"	13⅝"
17½”	16”	13⅞"	12⅛"	13⅝"
21”	19½”	17⅞"	16"	17½”
21”	19½”	17⅞"	16"	17½”
24½”	23"	20⅞"	19⅜"	20⅞"
24½”	23"	20⅞"	19⅜"	20⅞"

Minimum Clearances to Combustible Materials

Position	Sides	Rear	Front	Bottom	Flue	Top
Upflow	0"	0"	3"	C	0"	1"
Horizontal	6"	0"	3"	C	0"	6"

C = If placed on combustible floor, the floor MUST be wood ONLY.



Model	W	D	H
GDVT960403BN	17½"	28⅞"	34½"
GDVT960603BN	17½"	28⅞"	34½"
GDVT960804CN	21"	28⅞"	34½"
GDVT961005CN	21"	28⅞"	34½"
GDVT961205DN	24½"	28⅞"	34½"

	Air Return			Air Discharge
A	B	C	D	E
17½"	14⅝"	14"	14½"	16"
17½"	14⅝"	14"	14½"	16"
21"	18⅛"	17½"	18"	19½"
21"	18⅛"	17½"	18"	19½"
24½"	21⅝"	21"	21½"	23"

Minimum Clearances to Combustible Materials

Position	Sides	Rear	Front	Bottom	Flue	Top
Downflow	0"	0"	3"	NC	0"	1"
Horizontal	6"	0"	3"	C	0"	6"

C = If placed on combustible floor, the floor MUST be wood ONLY.
NC = For installation on non-combustible floors only. A combustible floor sub-base must be used for installations on combustible flooring.

MODEL/TEMP RISE RANGE (MID-RISE)	GDVT960403BNA* 20 - 50 (35)		GDVT960603BNA* 25 - 55 (40)		GDVT960804CNA* 25 - 55 (40)		GDVT961005CNA* 35-65 (50)		GDVT961205DNA* 35-65 (50)		GRVT960403BNA* 20-50 (35)	
	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE
Recommended CFM for High Heat/ Expected Temperature Rise	1025	35	1350	40	1760	40	1770	50	2150	50	1025	35
Lowest Recommended CFM for High Heat/Expected Temperature Rise	720	50	980	55	1300	55	1360	65	1650	65	720	50

MODEL/TEMP RISE RANGE (MID-RISE)	GRVT960603BNA* 30 - 60 (45)		GRVT960803BNA* 35-65 (50)		GRVT960804CNA* 25 - 55 (40)		GRVT961005CNA* 35-65 (50)		GRVT961005DNA* 30-60 (45)		GRVT961205DNA* 35-65 (50)	
	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE	CFM	RISE
Recommended CFM for High Heat/ Expected Temperature Rise	1200	45	1400	50	1760	40	1770	50	2000	45	2150	50
Lowest Recommended CFM for High Heat/Expected Temperature Rise	900	60	1090	65	1300	55	1360	65	1500	60	1650	65

GRVT960403BNA*, GRVT960603BNA*
GRVT960803BNA*, GDVT960403BNA*
GDVT960603BNA*
COOLING SPEED
(@ 0.1" - 0.8" w.c. ESP)

TONS	HIGH-STAGE CFM	LOW-STAGE CFM
1.5	600	420
2	800	560
2.5	1,000	700
3	1,200	840
MAX	1,400	

GRVT960804CNA*
GDVT960804CNA*
COOLING SPEED
(@ 0.1" - 0.8" w.c. ESP)

TONS	HIGH-STAGE CFM	LOW-STAGE CFM
2	800	560
2.5	1,000	700
3	1,200	840
4	1,600	1,120
MAX	1,760	

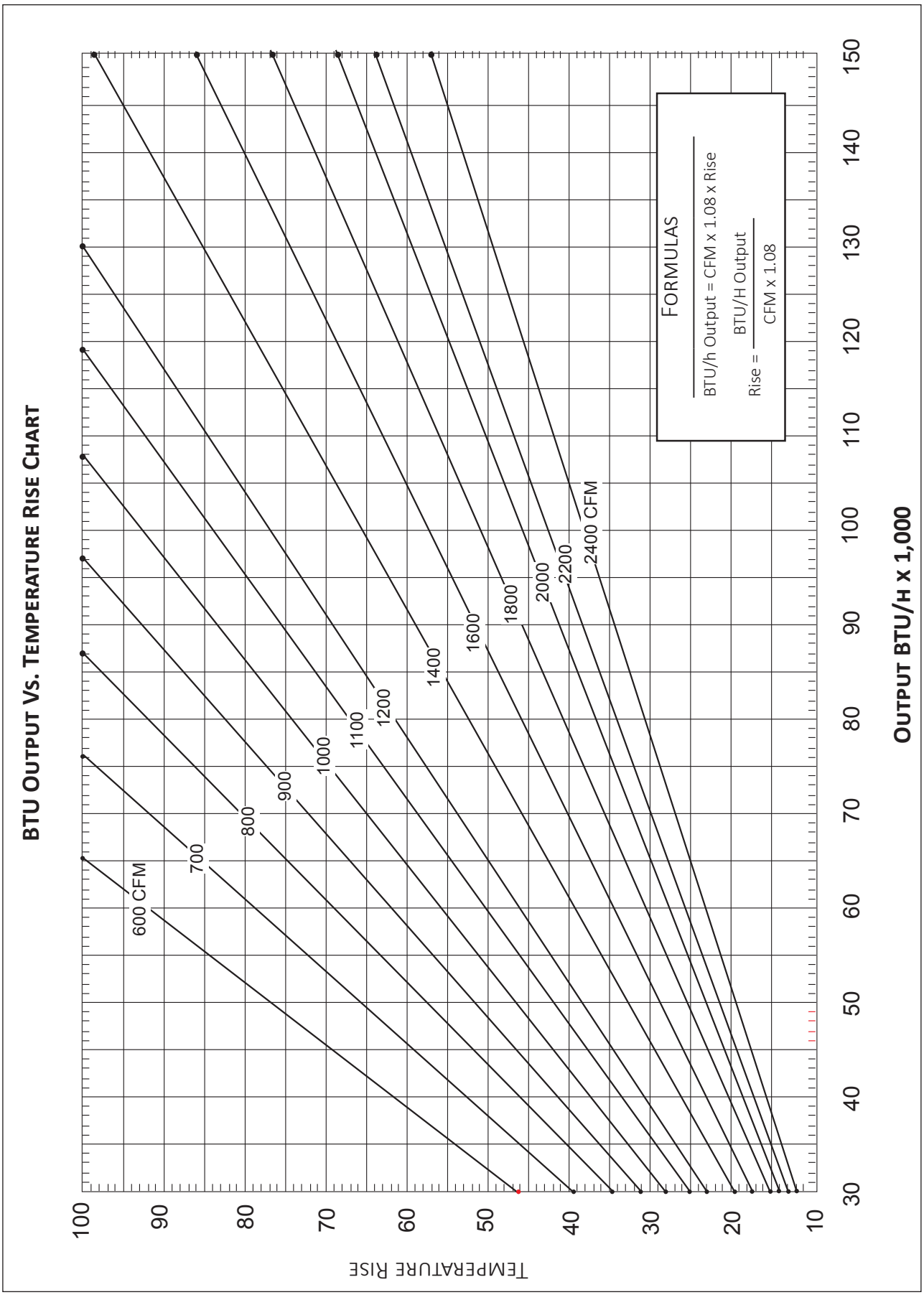
GRVT961005CNA*, GRVT961005DNA*
GRVT961205DNA*
COOLING SPEED
(@ 0.1" - 0.8" w.c. ESP)

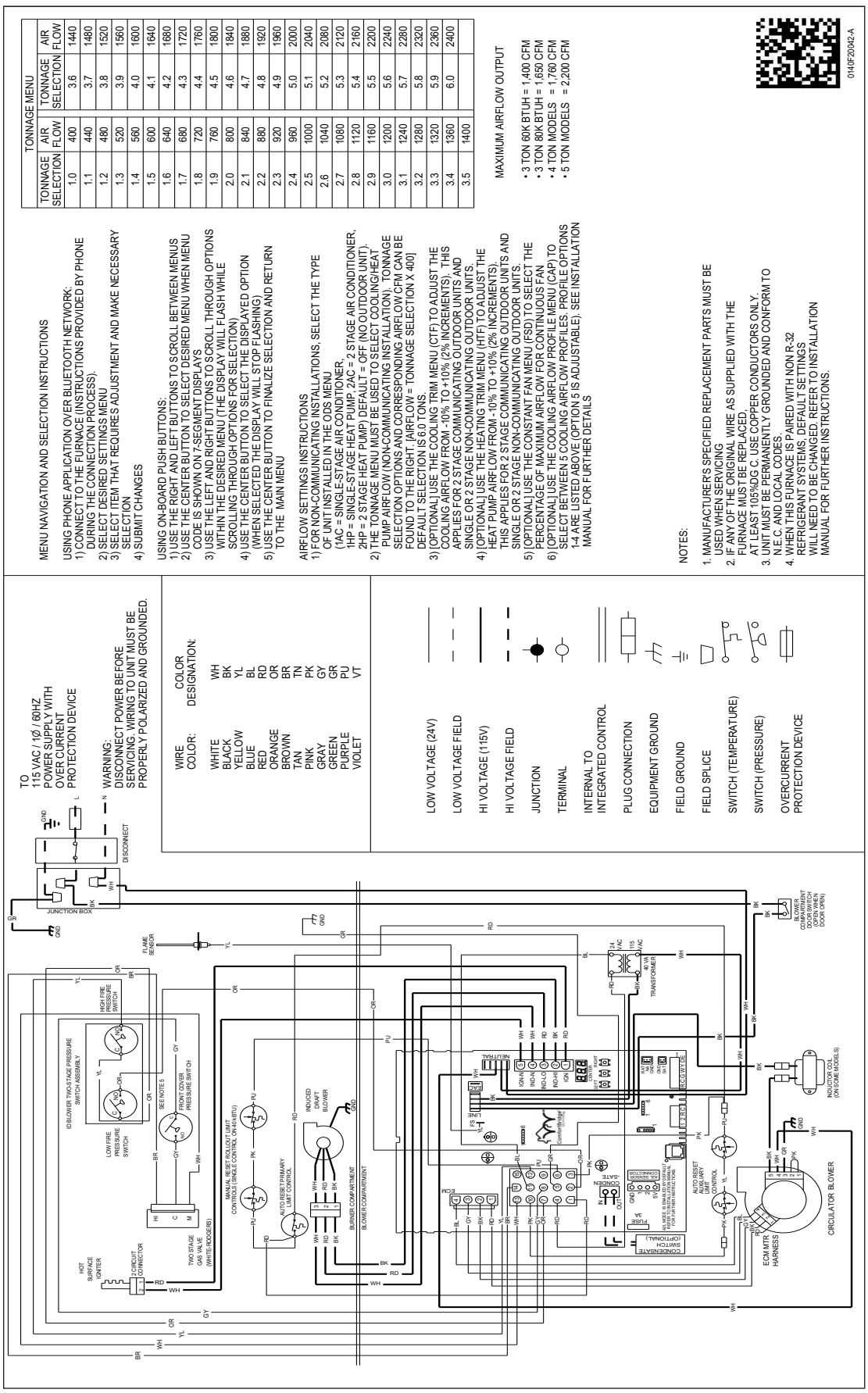
TONS	HIGH-STAGE CFM	LOW-STAGE CFM
2	800	560
3	1,200	840
4	1,600	1,120
5	2,000	1,400
MAX	2,200	

GDVT961005CNA*
GDVT961205DNA*
COOLING SPEED
(@ 0.1" - 0.8" w.c. ESP)

TONS	HIGH-STAGE CFM	LOW-STAGE CFM
2	800	560
3	1,200	840
4	1,600	1,120
5	2,000	1,400
MAX	2,200	

All furnaces ship as high speed for cooling. Installer must adjust blower speed as needed.
For most jobs, about 400 CFM per ton when cooling is desirable.
Do not operate above .5" w.c. ESP in heating mode. Operating CFM between .5" and .8" w.c. is tabulated for cooling purposes only


BTU Output Vs. Temperature Rise Chart
Temperature Rise
Output BTU/H x 1,000
600 CFM
700
800
900
1000
1100
1200
1400
1600
1800
2000
2200
2400 CFM
Formulas
BTU/h Output = CFM x 1.08 x Rise
Rise = BTU/H Output / CFM x 1.08



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 on the unit for the most up-to-date wiring.

MODEL	DESCRIPTION	GRVT96 0403BN	GRVT96 0603BN	GRVT96 0803BN	GRVT96 0804CN	GRVT96 1005CN	GRVT96 1005DN	GRVT96 1205DN
72950	Concentric Vent Kit (2")	√	√	√	√	√	√	—
72951	Concentric Vent Kit (3")	√	√	√	√	√	√	√
RF000142	Drain Kit Horizontal Left Vertical Flue	√	√	√	√	√	√	√
EFR02	External Filter Rack with 16"x25" Permanent Filter	√	√	√	√	√	√	√
0170K00000S	Flush Mount Vent Kit - 3" or 2"	√	√	√	√	√	√	√
0170K00001S	Flush Mount Vent Kit - 2"	√	√	√	√	√	√	—
HASFK	High-Altitude Natural Gas Kit	HASFK-1	HASFK-1	HASFK-1	HASFK-2	HASFK-3	TBD	HASFK-2
HASFK	High-Altitude LP Gas Kit	HASFK-1	HASFK-1	HASFK-1	HASFK-2	HASFK-2	TBD	HASFK-2
0270F20723	Horizontal Drain Tubing Kit	√	√	√	√	√	√	√
LPM-34	LP Conversion Kits	√	√	√	√	√	√	√

MODEL	DESCRIPTION	ADVT96 0403BN	ADVT96 0603BN	ADVT96 0804CN	ADVT96 1005CN	ADVT96 1205DN
72950	Concentric Vent Kit (2")	√	√	√	√	—
72951	Concentric Vent Kit (3")	√	√	√	√	√
CFSB17	Downflow Sub-Base 17.5"	√	√	—	—	—
CFSB21	Downflow Sub-Base 21"	—	—	√	√	—
CFSB24	Downflow Sub-Base 24"	—	—	—	—	√
RF000142	Drain Kit Horizontal Left Vertical Flue	√	√	√	√	√
0170K00000S	Flush Mount Vent Kit - 3" or 2"	√	√	√	√	√
0170K00001S	Flush Mount Vent Kit - 2"	√	√	√	√	—
HASFK	High-Altitude Natural Gas Kit	HASFK-1	HASFK-1	HASFK-2	HASFK-3	HASFK-3
HASFK	High-Altitude LP Gas Kit	HASFK-1	HASFK-1	HASFK-2	HASFK-2	HASFK-3
0270F20670	Horizontal Drain Tubing Kit	√	√	√	√	√
LPM-34	LP Conversion Kits	√	√	√	√	√

NOTES

√ Indicates available for this model