



VARIABLE REFRIGERANT FLOW SYSTEMS

VRF VOSA

Dedicated Outdoor Air Concealed Ducted Indoor Models - 60HZ

Bulletin No. 210698

July 2014

PRODUCT SPECIFICATIONS

Compact design for limited space requirements. Installs out of sight between the drop ceiling and ceiling slab with duct distribution to the indoor space.

Model has four-stage fan with integrated electric control box. Model has Fresh Air feature, which allows the introduction of outside air, if required. External static pressure of up to 1.13 in. w. g. allows extended ductwork if necessary.



APPROVALS

- Units are ETL certified for the U.S. and Canada.

WARRANTY

- Components** - Limited one year.

FEATURES

- Pre-Heat Function** - Delays the operation of the fan until the indoor coil has reached a pre-determined temperature which prevents the discharge of cold air while the system is operating in the "heating" mode.
- LED Readout/Infrared Receiver Panel** - Mounted on unit (may be remotely located). LEDs display unit operation status, and codes for maintenance and servicing. Infrared receiver for use with a wireless remote control (not furnished).



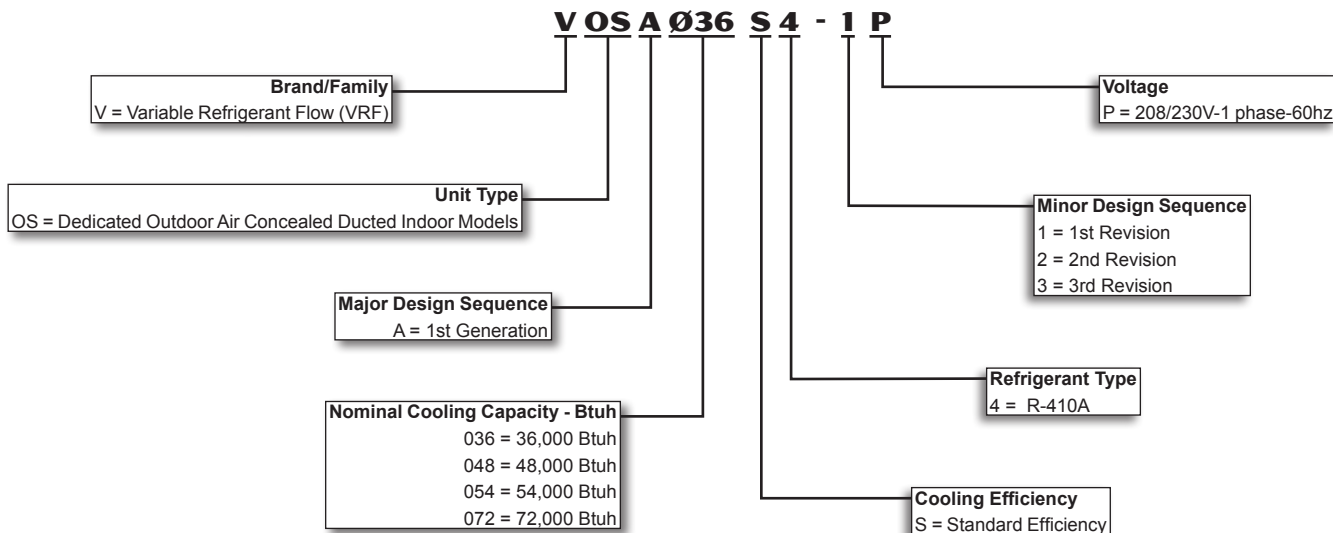
NOTE - FOR USE WITH HEAT PUMP SYSTEMS ONLY!

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- Auto Addressing (Heat Pump Systems Only)** - An optional wireless remote control (not furnished) can be used to inquire and modify each indoor unit's address.
- Auto Restart** - Automatically restores the previous function setting if power is interrupted.
- Electronic Expansion Valve** - Assures optimal performance throughout the application range.
- Flare Connections** - Equipped with liquid and gas flare fittings for quick and secure piping.

MODEL NUMBER IDENTIFICATION



SPECIFICATIONS

General Data		Nominal kBtuh	36	48	54	72
		Model Number	VOSA036S4	VOSA048S4	VOSA054S4	VOSA072S4
¹ Cooling Performance	Net Cooling Capacity - Btuh		36,000	48,000	54,000	72,000
	Total Unit Power Input (W)		630	630	970	970
	Rated current (A)		2.9	2.9	4.5	4.5
¹ Heating Performance	Net Heating Capacity - Btuh		30,000	40,000	45,000	57,000
	Total Unit Power Input (W)		630	630	970	970
	Rated current (A)		2.9	2.9	4.5	4.5
Refrigerant	Type		R-410A	R-410A	R-410A	R-410A
Indoor fan motor	Input - W		430	430	(2) 1000	(2) 1000
	Speed (high / medium / low) - rpm		929 / 868 / 808	929 / 868 / 808	966 / 873 / 781	966 / 873 / 781
Indoor coil	Number of rows		4	4	4	4
	Fin spacing - in.		1/16	1/16	5/64	5/64
	Coil length x height x width - in.		39-1/4 x 14 x 3-1/2		44-1/4 x 20-1/8 x 3-1/2	
	Number of circuits		7	7	20	20
	Tube outside diameter and type - in.		3/8 - Rifled Copper Tubing			
	Fin type		Hydrophillic Coated Aluminum			
	Expansion device type		Electronic Expansion Valve			
	Design Pressure (high / low)- psig		650 / 250			
Indoor Coil Connections	Liquid pipe o.d. - in. (flare)		3/8	3/8	(2) 3/8	(2) 3/8
	Gas pipe o.d. - in. (flare)		5/8	5/8	(2) 5/8	(2) 5/8
	Drain connection o.d. - in.		(1) 1-1/4	(1) 1-1/4	(1) 1-1/4	(1) 1-1/4
Indoor Blower	Airflow (high / medium / low) - cfm		1261 / 1101 / 948	1261 / 1101 / 948	1889 / 1589 / 1295	1886 / 1619 / 1354
	External static pressure - in. w.g.		0.20 - 0.79	0.20 - 0.79	0.20 - 1.13	0.20 - 1.13
	Sound data (high / medium / low) dBA		54 / 52 / 50	54 / 52 / 50	54 / 53 / 51	55 / 54 / 52
Control Wiring (AWG)		18/3 gauge (3-core shielded)				
Weight Data	Unit weight (net / shipping) - lbs.		153 / 168	153 / 168	245 / 274	245 / 274

ELECTRICAL DATA

Line voltage data - 60 hz - 1ph	208/230V	208/230V	208/230V	208/230V
² Maximum overcurrent protection (amps)	15	15	15	15
³ Minimum circuit ampacity	3.5	3.5	5.5	5.5
Indoor Blower Motor - Full load amps	2.8	2.8	(2) 2.18	(2) 2.18

¹ Nominal capacities are based on the following conditions (with 25 ft. of connecting refrigerant lines);

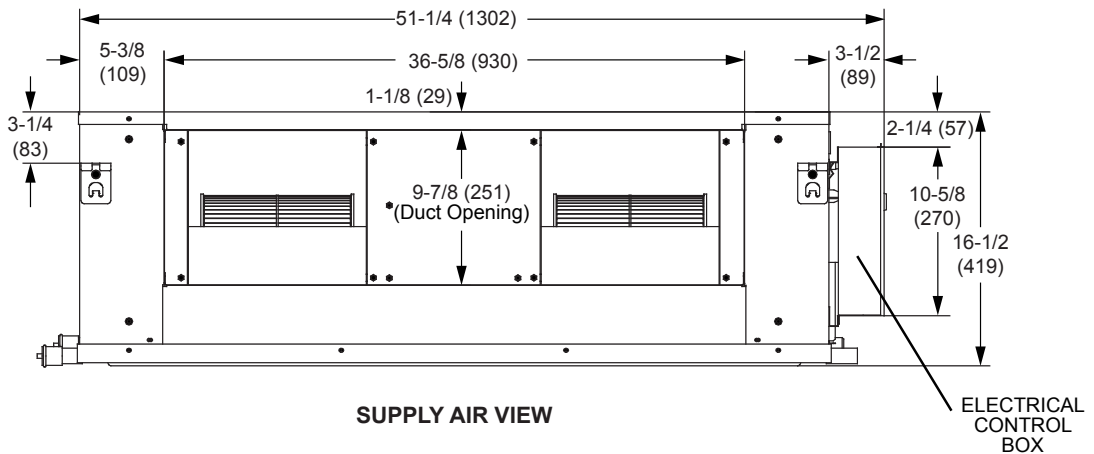
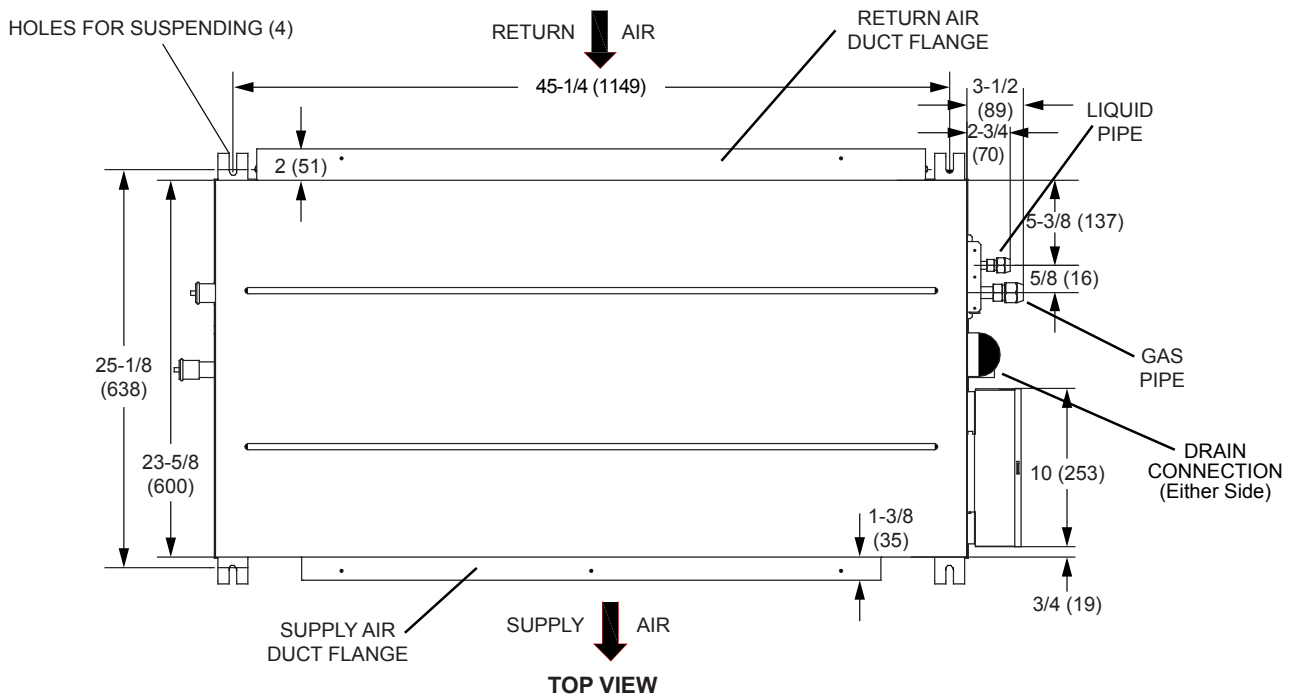
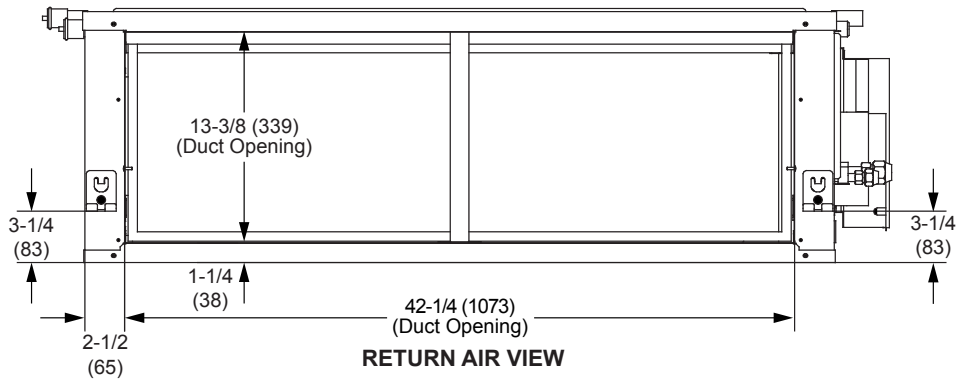
- Cooling Ratings - 95°F outdoor air temperature and 80°F db/67°F wb entering indoor coil air.
- Heating Ratings - 47°F db/43°F wb outdoor air temperature and 70°F db entering indoor coil air.

² HACR type circuit breaker or fuse.

³ Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

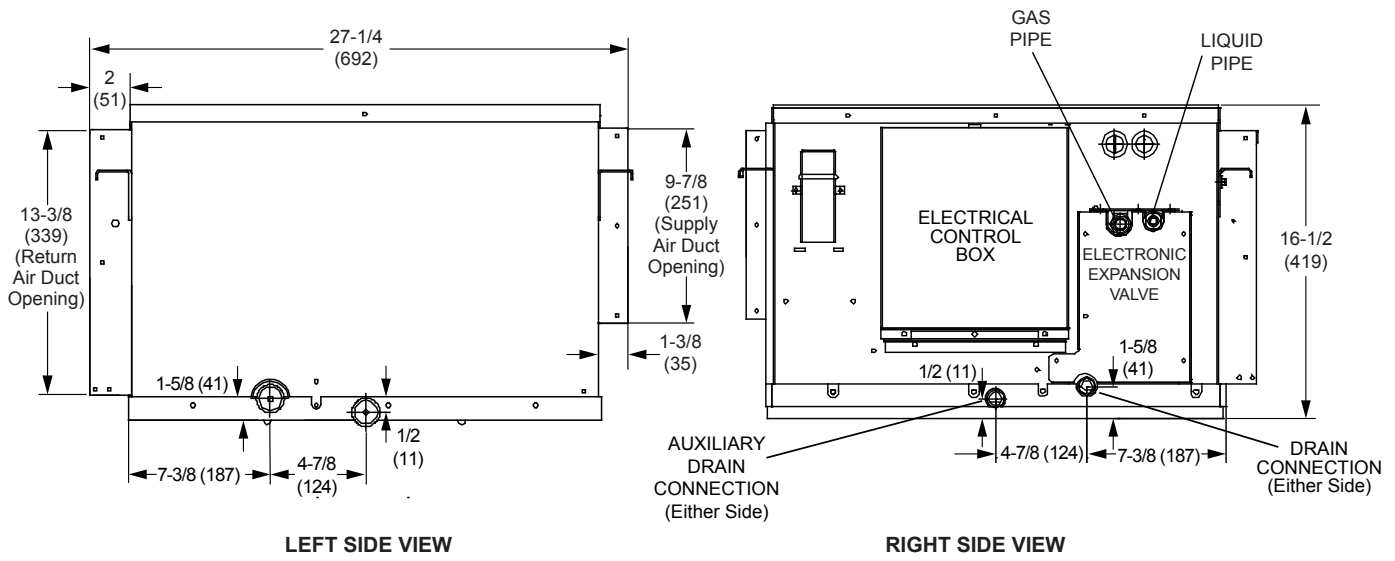
DIMENSIONS - INCHES (MM)

VOSA036S4, VOSA048S4



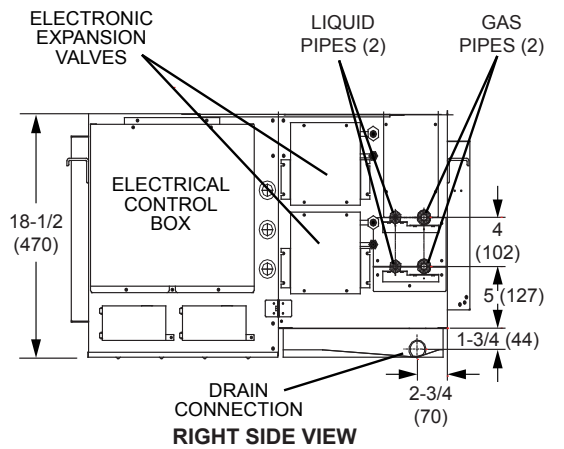
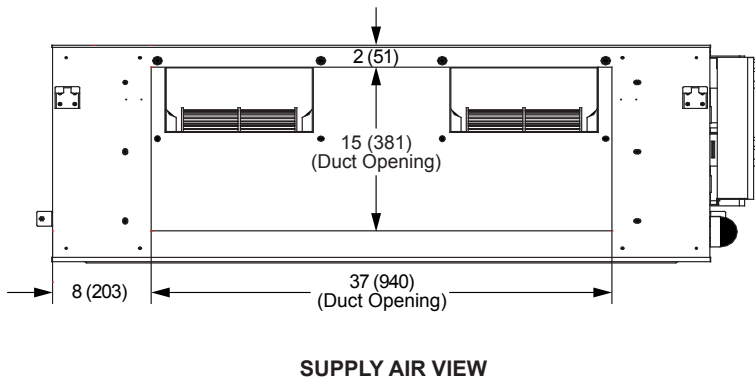
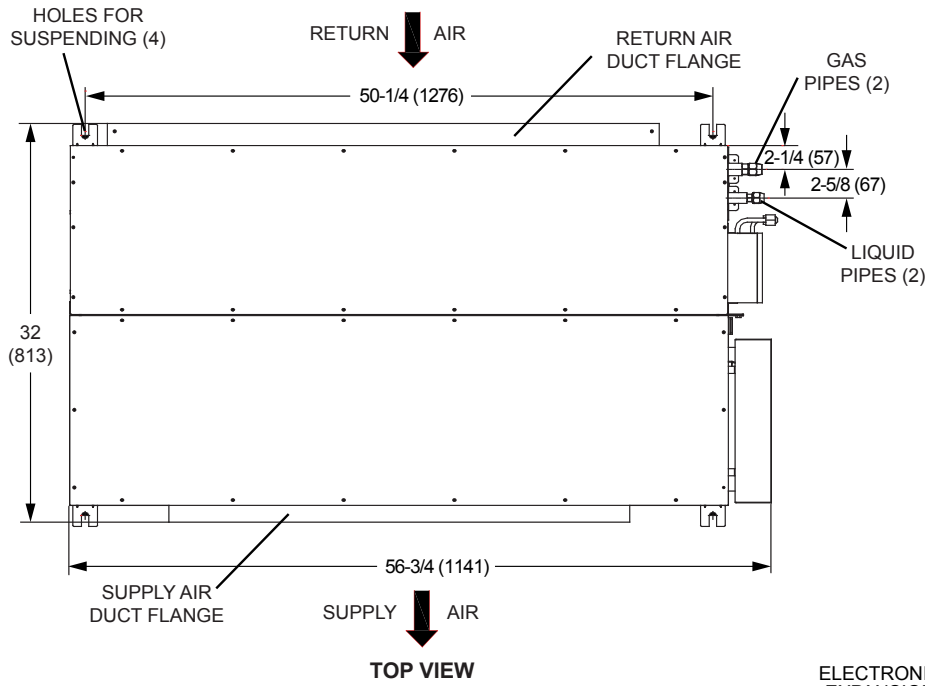
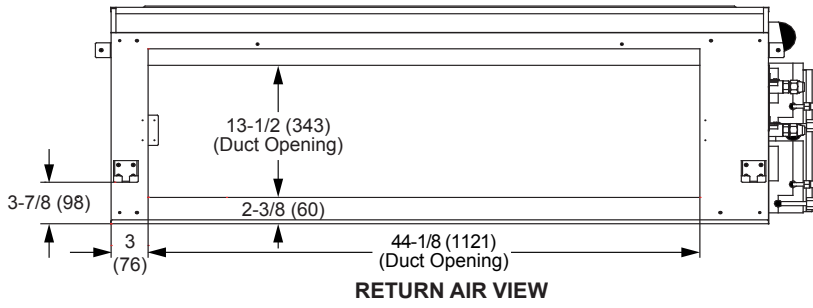
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VOSA036S4, VOSA048S4

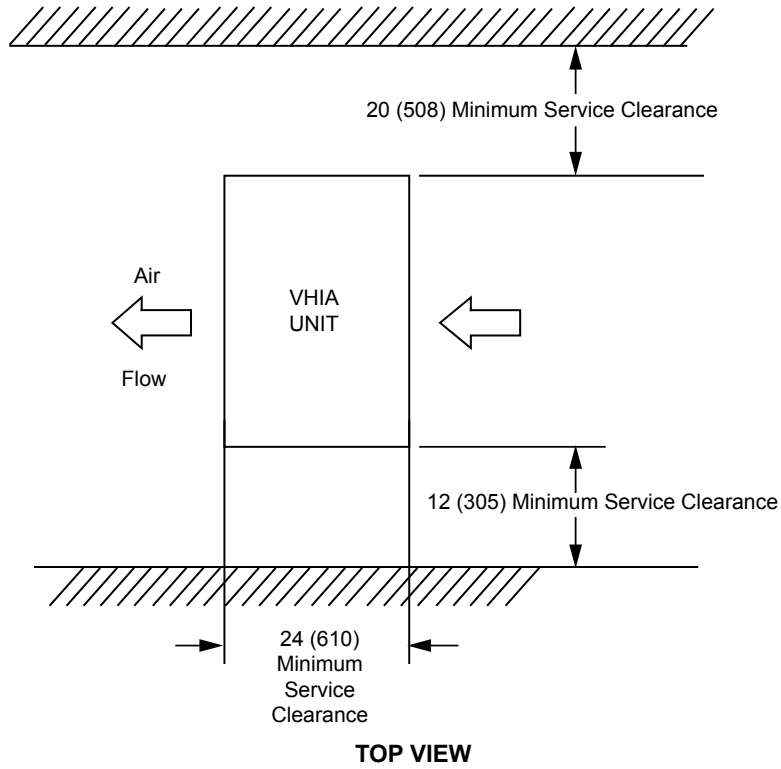


DIMENSIONS - INCHES (MM)

VOSA054S4, VOSA072S4

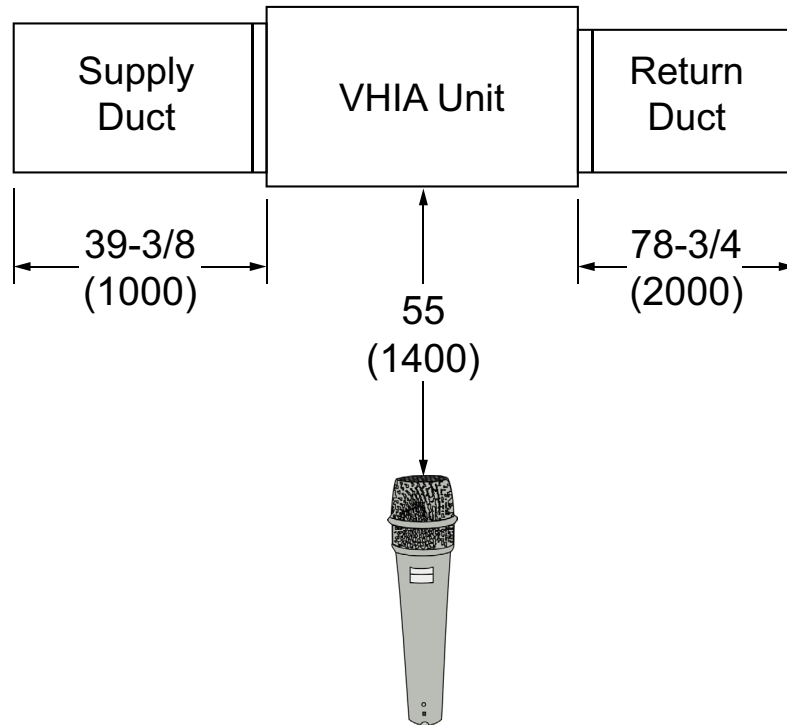


INSTALLATION CLEARANCES - INCHES (MM)



SOUND DATA

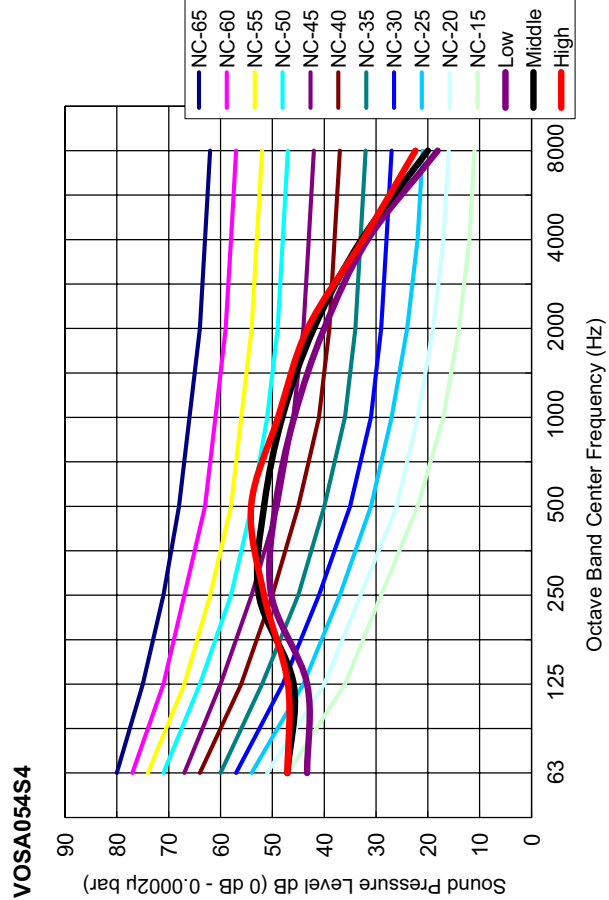
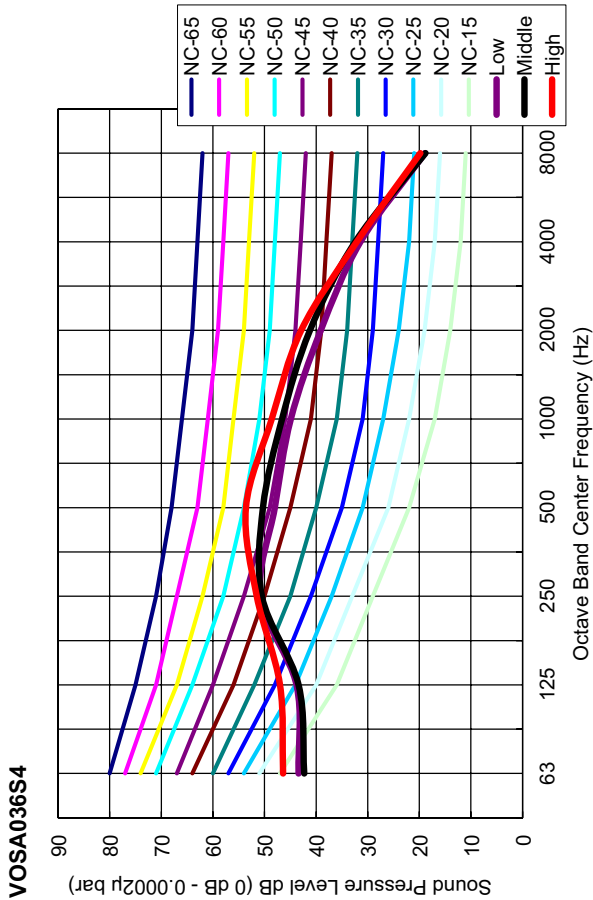
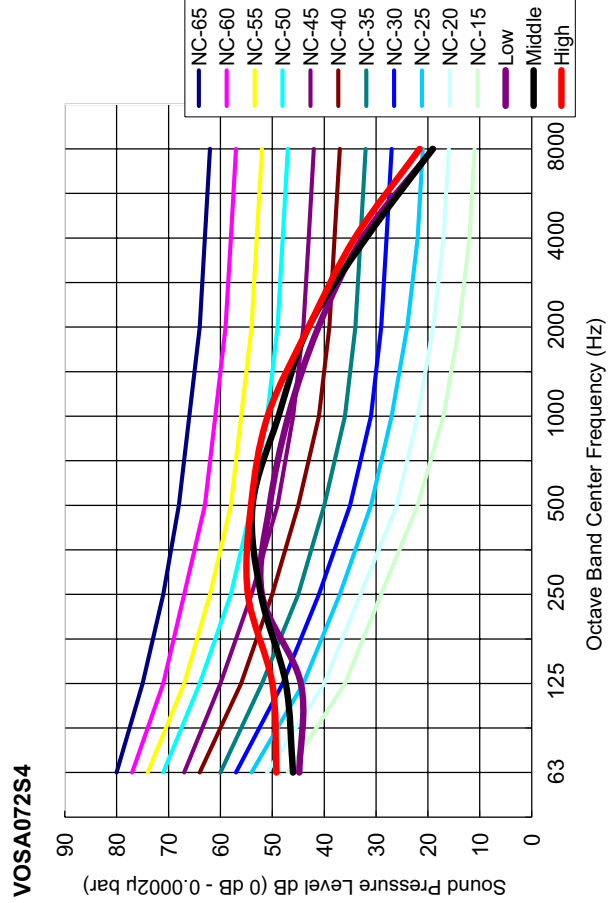
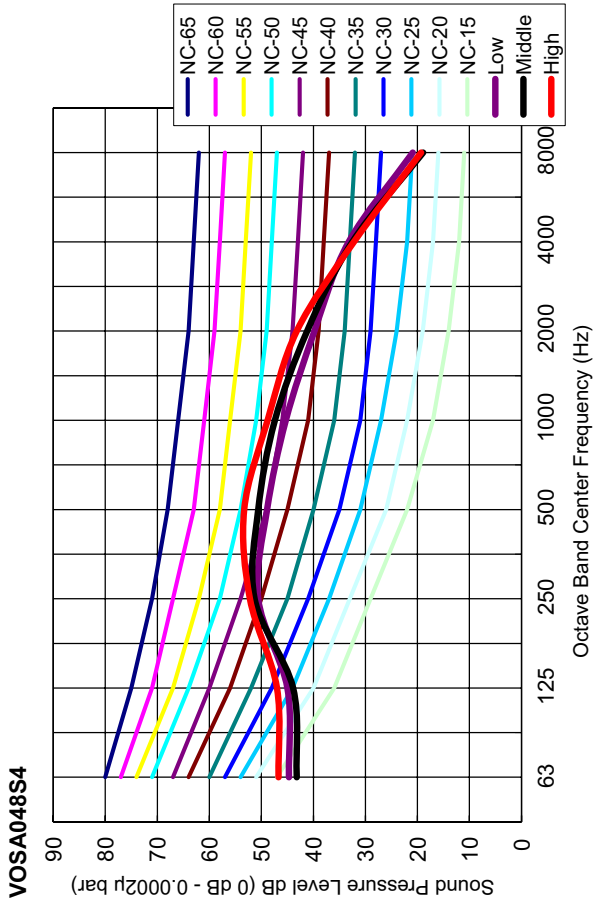
SOUND LEVELS



Model No.	Sound Rating Number (dBA)		
	Low	Medium	High
VOSA036S4	50	52	54
VOSA048S4	50	52	54
VOSA054S4	51	53	54
VOSA072S4	52	54	55

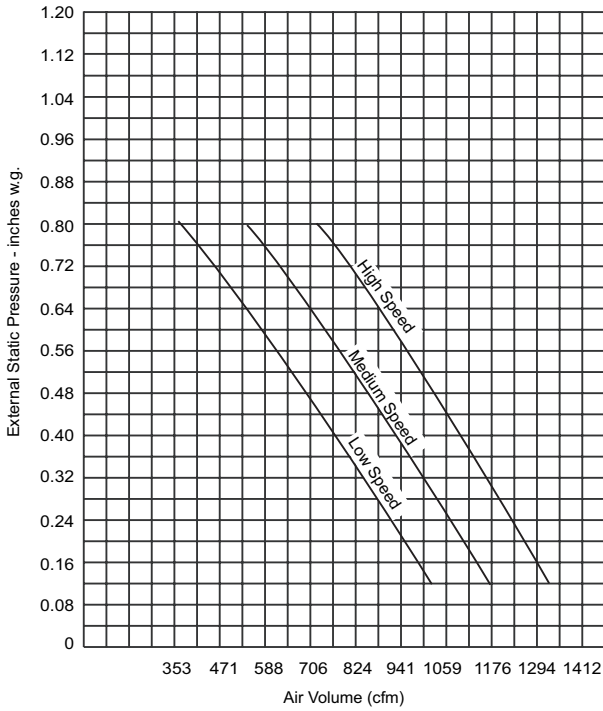
SOUND DATA

OCTAVE BAND LEVELS

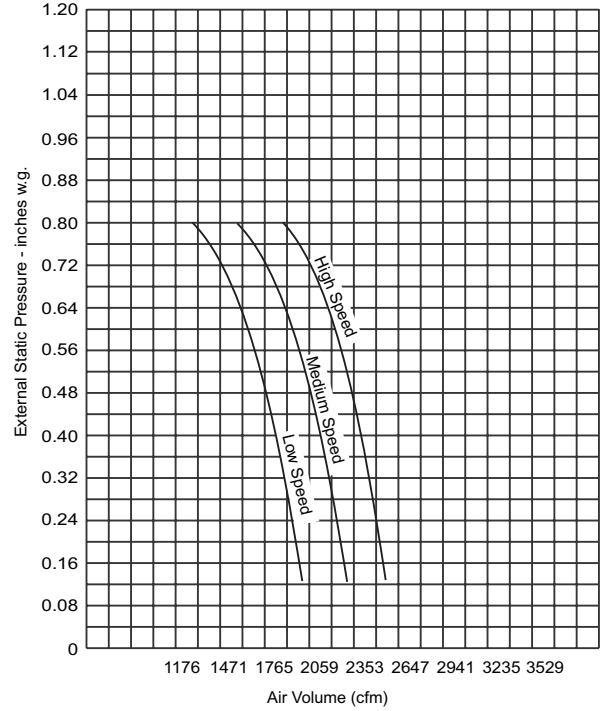


BLOWER DATA

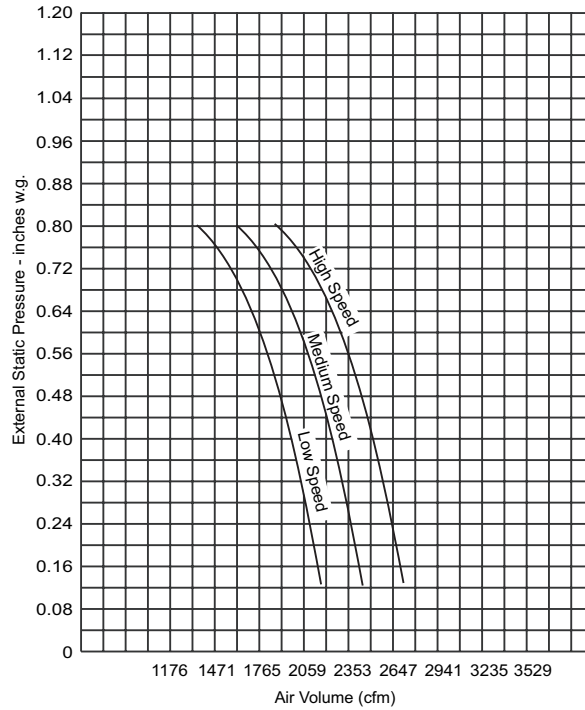
VOSA036S4, VOSA048S4



VOSA054S4



VOSA072S4



COOLING CAPACITY

Size	Outdoor Temperature °F (Dry Bulb)	Indoor Temperature - °F (Dry Bulb / Wet Bulb)											
		67 / 57		71 / 60		75 / 63		80 / 67		85 / 71		90 / 75	
		Total	Sensible	Total	Sensible	Total	Sensible	Total	Sensible	Total	Sensible	Total	Sensible
		MBH	MBH	MBH	MBH	MBH	MBH	MBH	MBH	MBH	MBH	MBH	MBH
036	50	21.12	16.73	25.59	20.26	30.05	23.80	36.00	28.51	41.95	33.22	42.91	33.98
	55	21.12	16.73	25.59	20.26	30.05	23.80	36.00	28.51	41.87	33.16	42.22	33.44
	60	21.12	16.73	25.59	20.26	30.05	23.80	36.00	28.51	41.18	32.62	41.53	32.89
	65	21.12	16.73	25.59	20.26	30.05	23.80	36.00	28.51	40.49	32.07	40.84	32.34
	70	21.12	16.73	25.59	20.26	30.05	23.80	36.00	28.51	39.80	31.52	40.15	31.80
	75	21.12	16.73	25.59	20.26	30.05	23.80	36.00	28.51	39.11	30.97	39.46	31.25
	80	21.12	16.73	25.59	20.26	30.05	23.80	36.00	28.51	38.42	30.43	38.76	30.70
	85	21.12	16.73	25.59	20.26	30.05	23.80	36.00	28.51	37.73	29.88	38.07	30.15
	90	21.12	16.73	25.59	20.26	30.05	23.80	36.00	28.51	37.04	29.33	37.38	29.61
	95	21.12	16.73	25.59	20.26	30.05	23.80	36.00	28.51	36.35	28.79	36.69	29.06
	100	21.12	16.73	25.59	20.26	30.05	23.80	35.31	27.97	35.66	28.24	35.98	28.49
	105	21.12	16.73	25.59	20.26	30.05	23.80	34.62	27.42	34.85	27.60	34.90	27.64
110	21.12	16.73	25.59	20.26	30.05	23.80	32.55	25.78	33.35	26.41	33.82	26.79	
115	21.12	16.73	24.48	19.39	25.08	19.86	25.88	20.50	26.68	21.13	27.48	21.77	
048	50	28.17	22.45	34.12	27.19	40.07	31.93	48.00	38.26	55.93	44.58	57.21	45.60
	55	28.17	22.45	34.12	27.19	40.07	31.93	48.00	38.26	55.83	44.50	56.29	44.86
	60	28.17	22.45	34.12	27.19	40.07	31.93	48.00	38.26	54.91	43.76	55.37	44.13
	65	28.17	22.45	34.12	27.19	40.07	31.93	48.00	38.26	53.99	43.03	54.45	43.40
	70	28.17	22.45	34.12	27.19	40.07	31.93	48.00	38.26	53.07	42.29	53.53	42.66
	75	28.17	22.45	34.12	27.19	40.07	31.93	48.00	38.26	52.15	41.56	52.61	41.93
	80	28.17	22.45	34.12	27.19	40.07	31.93	48.00	38.26	51.22	40.83	51.69	41.19
	85	28.17	22.45	34.12	27.19	40.07	31.93	48.00	38.26	50.30	40.09	50.77	40.46
	90	28.17	22.45	34.12	27.19	40.07	31.93	48.00	38.26	49.38	39.36	49.84	39.73
	95	28.17	22.45	34.12	27.19	40.07	31.93	48.00	38.26	48.46	38.62	48.92	38.99
	100	28.17	22.45	34.12	27.19	40.07	31.93	47.08	37.52	47.54	37.89	47.97	38.23
	105	28.17	22.45	34.12	27.19	40.07	31.93	46.16	36.79	46.47	37.04	46.53	37.09
110	28.17	22.45	34.12	27.19	40.07	31.93	43.40	34.59	44.46	35.44	45.09	35.94	
115	28.17	22.45	32.64	26.02	33.44	26.65	34.51	27.50	35.58	28.35	36.64	29.20	
054	50	31.69	25.44	38.38	30.82	45.07	36.19	54.00	43.36	62.93	50.53	64.36	51.68
	55	31.69	25.44	38.38	30.82	45.07	36.19	54.00	43.36	62.81	50.43	63.33	50.85
	60	31.69	25.44	38.38	30.82	45.07	36.19	54.00	43.36	61.77	49.60	62.29	50.02
	65	31.69	25.44	38.38	30.82	45.07	36.19	54.00	43.36	60.74	48.77	61.25	49.19
	70	31.69	25.44	38.38	30.82	45.07	36.19	54.00	43.36	59.70	47.94	60.22	48.36
	75	31.69	25.44	38.38	30.82	45.07	36.19	54.00	43.36	58.66	47.11	59.18	47.52
	80	31.69	25.44	38.38	30.82	45.07	36.19	54.00	43.36	57.63	46.27	58.15	46.69
	85	31.69	25.44	38.38	30.82	45.07	36.19	54.00	43.36	56.59	45.44	57.11	45.86
	90	31.69	25.44	38.38	30.82	45.07	36.19	54.00	43.36	55.56	44.61	56.07	45.03
	95	31.69	25.44	38.38	30.82	45.07	36.19	54.00	43.36	54.52	43.78	55.04	44.20
	100	31.69	25.44	38.38	30.82	45.07	36.19	52.96	42.53	53.48	42.95	53.97	43.33
	105	31.69	25.44	38.38	30.82	45.07	36.19	51.93	41.70	52.28	41.98	52.35	42.04
110	31.69	25.44	38.38	30.82	45.07	36.19	48.82	39.20	50.02	40.17	50.73	40.74	
115	31.69	25.44	36.72	29.49	37.62	30.21	38.82	31.17	40.02	32.14	41.22	33.10	
072	50	42.25	34.26	51.17	41.50	60.10	48.74	72.00	58.39	83.90	68.04	85.82	69.60
	55	42.25	34.26	51.17	41.50	60.10	48.74	72.00	58.39	83.74	67.92	84.44	68.48
	60	42.25	34.26	51.17	41.50	60.10	48.74	72.00	58.39	82.36	66.80	83.05	67.36
	65	42.25	34.26	51.17	41.50	60.10	48.74	72.00	58.39	80.98	65.68	81.67	66.24
	70	42.25	34.26	51.17	41.50	60.10	48.74	72.00	58.39	79.60	64.55	80.29	65.12
	75	42.25	34.26	51.17	41.50	60.10	48.74	72.00	58.39	78.22	63.43	78.91	64.00
	80	42.25	34.26	51.17	41.50	60.10	48.74	72.00	58.39	76.84	62.31	77.53	62.88
	85	42.25	34.26	51.17	41.50	60.10	48.74	72.00	58.39	75.46	61.19	76.15	61.76
	90	42.25	34.26	51.17	41.50	60.10	48.74	72.00	58.39	74.07	60.07	74.77	60.64
	95	42.25	34.26	51.17	41.50	60.10	48.74	72.00	58.39	72.69	58.95	73.39	59.52
	100	42.25	34.26	51.17	41.50	60.10	48.74	70.62	57.27	71.31	57.83	71.96	58.36
	105	42.25	34.26	51.17	41.50	60.10	48.74	69.24	56.15	69.70	56.53	69.80	56.61
110	42.25	34.26	51.17	41.50	60.10	48.74	65.10	52.79	66.70	54.09	67.64	54.86	
115	42.25	34.26	48.96	39.71	50.16	40.68	51.76	41.98	53.36	43.28	54.96	44.57	

NOTE - MBH = 1000 BTUs per hour.

HEATING CAPACITY

Size	Outdoor Temperature (°F)		Indoor Temperature - °F (Dry Bulb)					
			61	64	67	70	73	75
	Dry Bulb	Wet Bulb	Total Capacity					
		MBH	MBH	MBH	MBH	MBH	MBH	
036	-3	-4	15.30	14.69	14.08	13.47	12.86	12.46
	2	1	17.06	16.45	15.84	15.23	14.62	14.21
	7	6	18.82	18.21	17.60	16.99	16.38	15.97
	12	10	20.23	19.62	19.01	18.40	17.79	17.38
	17	15	21.99	21.38	20.77	20.16	19.55	19.14
	22	20	23.75	23.14	22.53	21.92	21.31	20.90
	27	24	25.15	24.54	23.93	23.32	22.71	22.31
	32	29	26.91	26.30	25.69	25.08	24.47	24.06
	37	34	28.67	28.06	27.45	26.84	26.23	25.82
	42	38	30.08	29.47	28.86	28.25	27.64	26.51
	47	43	31.84	31.23	30.62	30.00	27.91	26.51
	52	47	33.25	32.64	32.02	30.00	27.91	26.51
57	52	35.00	34.19	32.09	30.00	27.91	26.51	
048	-3	-4	22.48	21.66	20.85	20.03	19.22	18.68
	2	1	24.60	23.79	22.97	22.16	21.35	20.80
	7	6	26.73	25.91	25.10	24.28	23.47	22.93
	12	10	28.43	27.61	26.80	25.98	25.17	24.63
	17	15	30.55	29.74	28.92	28.11	27.30	26.75
	22	20	32.68	31.86	31.05	30.23	29.42	28.88
	27	24	34.38	33.56	32.75	31.93	31.12	30.58
	32	29	36.50	35.69	34.87	34.06	33.24	32.70
	37	34	38.63	37.81	37.00	36.18	35.37	34.83
	42	38	40.33	39.51	38.70	37.88	37.07	35.35
	47	43	42.45	41.64	40.82	40.00	37.21	35.35
	52	47	44.15	43.34	42.52	40.00	37.21	35.35
57	52	46.28	45.46	42.79	40.00	37.21	35.35	
054	-3	-4	24.04	23.12	22.21	21.29	20.38	19.76
	2	1	26.56	25.65	24.73	23.81	22.90	22.29
	7	6	29.08	28.17	27.25	26.34	25.42	24.81
	12	10	31.10	30.19	29.27	28.36	27.44	26.83
	17	15	33.63	32.71	31.80	30.88	29.96	29.35
	22	20	36.15	35.23	34.32	33.40	32.49	31.88
	27	24	38.17	37.25	36.34	35.42	34.51	33.90
	32	29	40.69	39.78	38.86	37.94	37.03	36.42
	37	34	43.22	42.30	41.38	40.47	39.55	38.94
	42	38	45.23	44.32	43.40	42.49	41.57	39.77
	47	43	47.76	46.84	45.93	45.00	41.86	39.77
	52	47	49.78	48.86	47.94	45.00	41.86	39.77
57	52	52.30	51.28	48.14	45.00	41.86	39.77	
072	-3	-4	30.13	28.97	27.81	26.65	25.49	24.72
	2	1	33.36	32.20	31.04	29.88	28.72	27.95
	7	6	36.59	35.43	34.27	33.11	31.95	31.18
	12	10	39.18	38.02	36.86	35.70	34.54	33.76
	17	15	42.41	41.25	40.09	38.93	37.77	36.99
	22	20	45.64	44.48	43.32	42.16	41.00	40.22
	27	24	48.22	47.06	45.90	44.74	43.58	42.81
	32	29	51.45	50.29	49.13	47.97	46.81	46.04
	37	34	54.68	53.52	52.36	51.20	50.04	49.27
	42	38	57.26	56.10	54.94	53.78	52.62	50.37
	47	43	60.49	59.33	58.17	57.00	53.02	50.37
	52	47	63.08	61.92	60.76	57.00	53.02	50.37
57	52	66.31	64.95	60.98	57.00	53.02	50.37	

NOTE - MBH = 1000 BTUs per hour.



Visit us at www.lennox.com

For the latest technical information, www.lennoxcommercial.com

Contact us at 1-800-4-LENNOX



NOTE - Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability. Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury. Installation and service must be performed by a qualified installer and servicing agency.

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