

4DHV SINGLE-ZONE PRODUCT SPECIFICATIONS

UP TO 19.0 SEER
SINGLE ZONE DUCTLESS HEAT PUMP

FORM NO. 4DHVSINGLE-100 (6/2019)

OUTDOOR UNITS - 4DHV



INDOOR UNITS - DWH



**Wireless Remote
Controller
(furnished with
Wall-Mount Model)**



FEATURES AND BENEFITS - OUTDOOR UNITS

CONTENTS

ACCESSORIES - FURNISHED	23
AHRI SYSTEM MATCHES	14
AIR THROW DATA - WALL-MOUNTED INDOOR UNITS.....	22
DIMENSIONS - OUTDOOR UNITS - INCHES (MM)	6
DIMENSIONS - WALL MOUNTED INDOOR UNITS - INCHES (MM)	8
DIMENSIONS - WALL MOUNTED INDOOR UNITS - WALL PLATES - INCHES (MM)	9
INSTALLATION CLEARANCES - OUTDOOR UNITS - INCHES (MM)	11
INSTALLATION CLEARANCES - WALL-MOUNTED INDOOR UNITS - INCHES (MM)	12
LINE SET AND ELEVATION GUIDELINES	12
MODEL NUMBER GUIDE	5
OPTIONAL ACCESSORIES - ORDER SEPARATELY	25
SOUND LEVELS - TEST CONDITIONS	15
SPECIFICATIONS - OUTDOOR UNITS	13
SPECIFICATIONS - WALL MOUNTED INDOOR UNITS.....	14

EQUIPMENT WARRANTY

Compressor - Limited warranty for seven years.

Accessories/Controls - 1 year.

All other covered components - Five years.

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

APPLICATIONS

SEER up to 19.00.

HSPF up to 10.00.

0.75 through 3 ton.

Single phase power supply - 208/230V (all models) and 115V (009-012 models only).

Outdoor unit sound levels as low as 52 dB.

Indoor unit sound levels as low as 24 dB.

Ductless mini-split systems provide a wide range of capacities and applications and provide an alternative when a ducted system is impractical or cost prohibitive.

Units shipped completely factory assembled, internally piped, and wired.

Installer must set outdoor unit, hang indoor unit, connect refrigerant lines, and make electrical connections to complete job.

NOTE - Outdoor unit is designed for outdoor use.

APPROVALS

AHRI Certified to AHRI Standard 210/240.

Rated according to U.S. Department of Energy (DOE) test procedures.

Indoor and outdoor units and components within bonded for grounding to meet safety standards for servicing required by UL and CEC.

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

Meets 2014 Florida Building Code Wind Design Criteria:

- Ultimate Wind Speed - 186 miles per hour
- Risk Categories - III and IV
- Wind Exposures - C and D
- Mean Roof Heights - Up to 60 feet above ground

REFRIGERATION SYSTEM

R-410A Refrigerant

Non-chlorine, ozone friendly, R-410A.

Unit pre-charged with refrigerant.

Outdoor Coil

Aluminum fins fitted to copper tubes.

Wire grille guard provided.

Outdoor Fan

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

Fan guard provided.

Refrigerant Line Connections, Service Valve

Flare connection lines are located on side of unit cabinet.

Fully serviceable brass service valve prevents corrosion and provides access to refrigerant system. Shut-off valve can be fully shut off while 3-way service valve (with service port) may be accessed to manage refrigerant charge while servicing system.

COMPRESSOR

Variable Frequency Rotary Compressor

Compressor features high efficiency operation.

Balanced for reduced vibration and quiet operation.

Brushless DC motor uses powerful Neodymium magnets, which are approximately 15-20 times stronger than ferrite magnets used in conventional AC compressors.

Compressor Crankcase Heater

Protects against liquid refrigerant migration that can occur during low ambient operation.

CONTROLS

DC Inverter Control

Provides continuous operation, while adjusting capacity according to room temperature.

The accurate sensing of cooling loads prevents frequent changes in capacity and ensures efficient, economical operation.

Inverter Module Protection

Protects against differences in current, voltage and temperature. Displays code on the indoor unit indicating a need for servicing.

Outdoor Unit Microprocessor

Electronic expansion valve control.

Automatic compressor timed-off protection (3 minutes).

Temperature sensor.

LEDs on control display error codes and assist in troubleshooting.

4-Way reversing valve control.

Capillary Tube Refrigerant Metering

Refrigerant metering device consisting of small diameter tubes feeding liquid refrigerant into the evaporator coil.

Furnished on all units.

Check Valve

Bypasses refrigerant during the reverse heating cycle.

Furnished on all models.

Compressor Overcurrent Protection

Overcurrent protection can result due to any of the following:

- Ambient temperature is too high
- Locked rotor on the compressor
- Outdoor air is blocked or restricted

Condenser High Temperature Protection

Condenser high temperature can occur due to any of the following conditions:

- High outdoor ambient
- Outdoor fan blocked
- Outdoor coil blocked

The outdoor coil thermistor continuously monitors the temperature and communicates with the microprocessor.

Depending on the temperature measured, the compressor will be allowed to increase the frequency if needed to meet the load or is forced to run at the current or reduced frequency. If the temperature becomes excessively high the compressor will be de-energized.

Compressor Discharge Temperature Protection

The compressor discharge line thermistor continuously monitors the temperature and communicates with the microprocessor.

Depending on the temperature measured, the compressor will be allowed to increase the frequency to meet the load or is forced to run at the current or reduced frequency. If the temperature becomes excessively high, the compressor will be de-energized.

Voltage Protection

Protects unit from low or high voltage fluctuations.

Terminal Strip

Furnished for easy wiring connections.

Defrost Control

Defrost cycle is automatically enabled if there is a build-up of frost on the outdoor coil. Outdoor fan and indoor blower operation is terminated during the defrost cycle.

Defrost LED is lit on the indoor unit panel on the front cover during a defrost cycle.

Reversing Valve

4-way interchange reversing valve effects a rapid change in direction of refrigerant flow resulting in quick changeover from cooling to heating and vice versa.

Valve operates on pressure differential between outdoor unit and indoor unit of the system.

CABINET

Constructed of heavy gauge steel.

Tabs on unit base allow secure mounting to slab.

Condensate drain outlets furnished on unit base. Drain must be field furnished.

Access cover for power and control wiring connections.

Access cover for service valves.

FEATURES AND BENEFITS - INDOOR UNITS

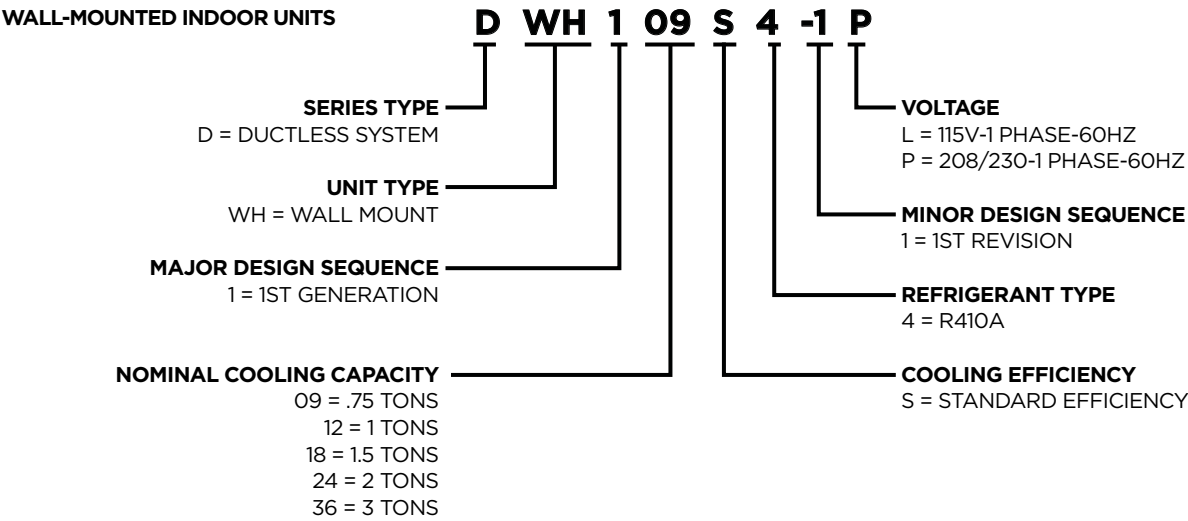
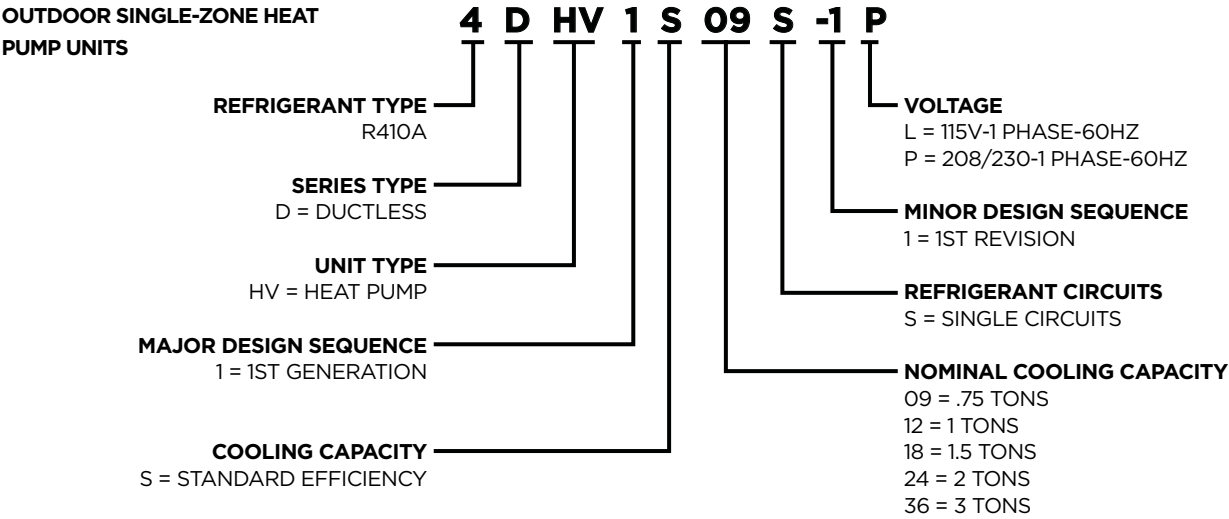
WALL-MOUNTED INDOOR UNITS



Low-sound, three-speed Wall Mount with LED display offers three access points for refrigerant outlet pipes: left, right or rear. The front panel can be raised for accessible wiring and maintenance. Swing louver angles to 90°. Unit installs horizontally on a vertical wall.

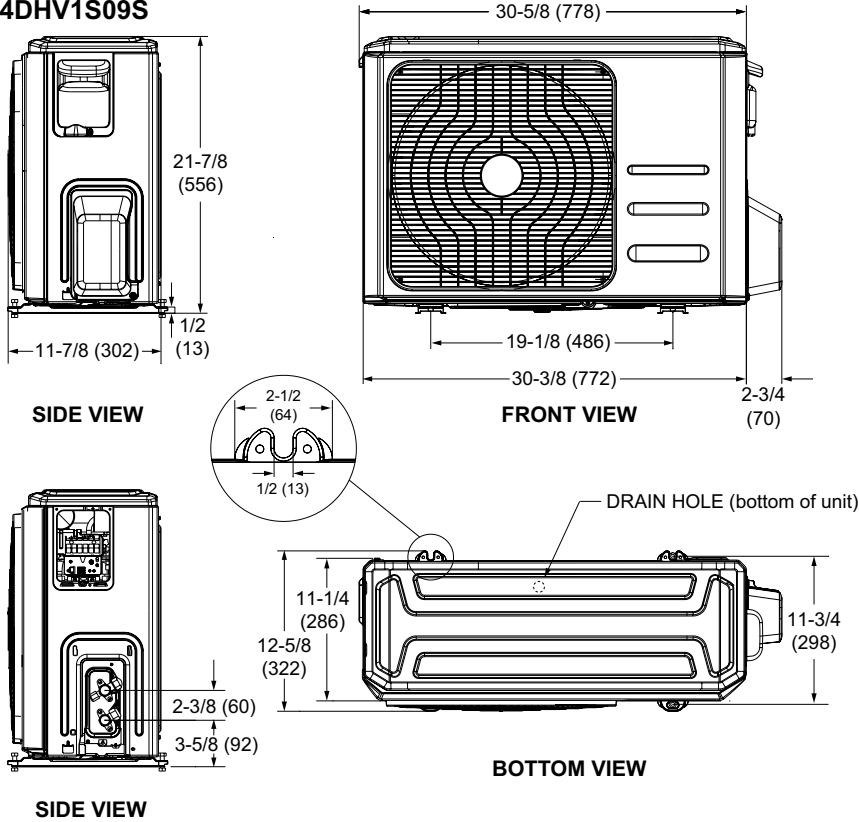
- **Pre-Heat Function** - Delays the operation of the fan until the indoor coil has reached a pre-determined temperature which prevents the discharge of cold air while the system is operating in the “heating” mode.
- **LED Readout** - Mounted on unit. LED displays unit operation status, and codes for maintenance and servicing.
- **Auto Restart** - Automatically restores the previous function setting if power is interrupted.
- **Cooling Override** - Button on the indoor unit allows a temporary 30 minute override of the system for forced “AUTO” or “COOLING” operation.
- **Flare Connections** - Equipped with liquid and gas flare fittings for quick and secure piping.
- **Multi-Refrigerant Outlet** - Allows left, right, or rear access for refrigeration line connection.
- **Three Speed Fan** - Fan functions at three speeds: low, medium and high.
- **Air Filter** - Cleanable air filter is furnished as standard.

MODEL NUMBER GUIDE

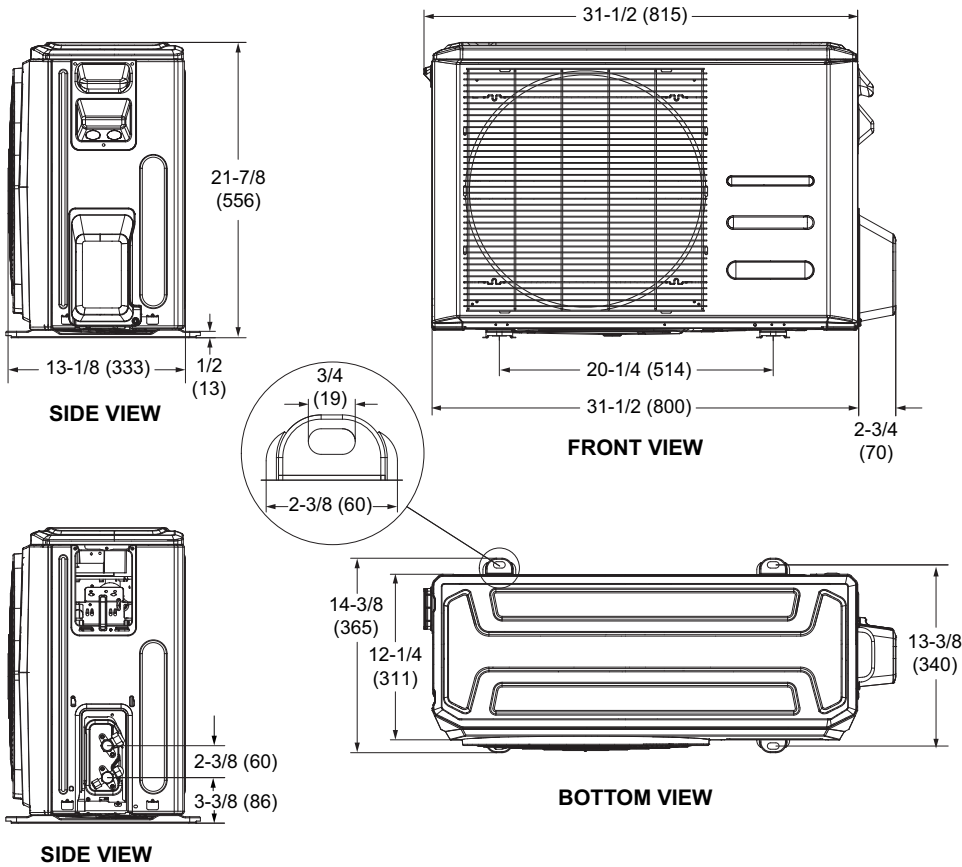


DIMENSIONS - OUTDOOR UNITS - INCHES (MM)

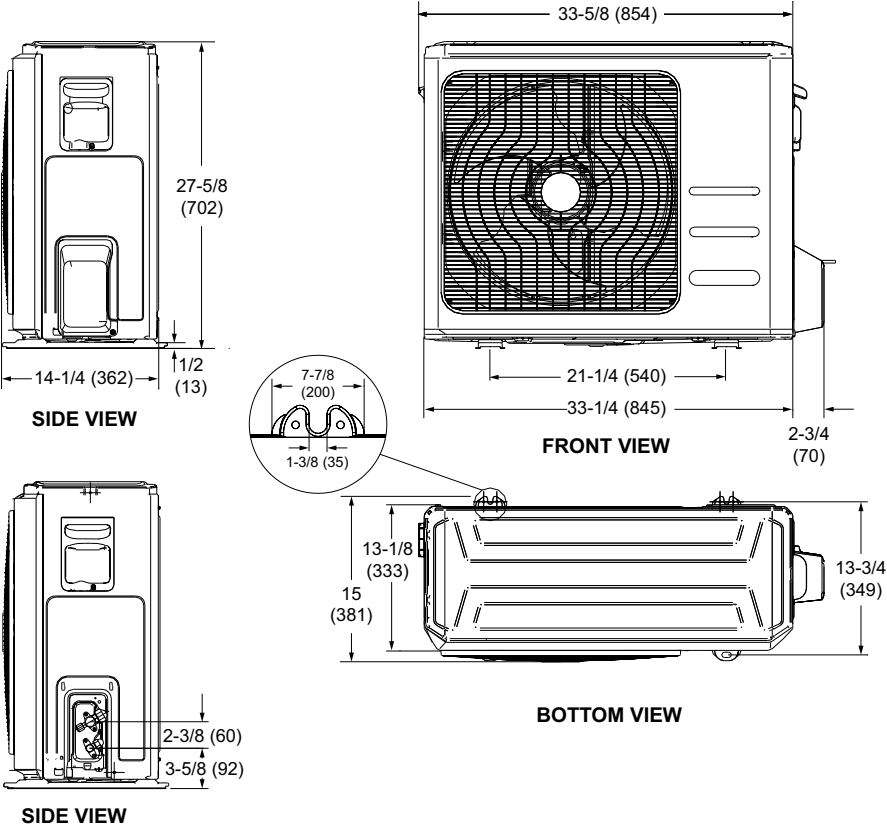
4DHV1S09S



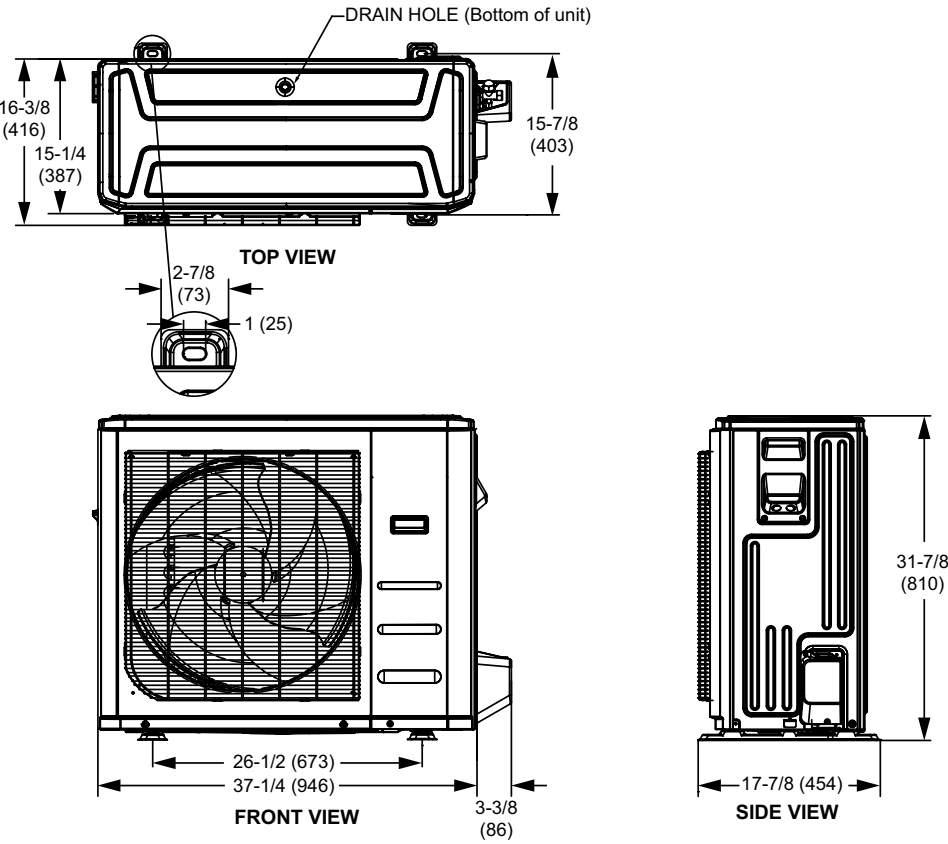
4DHV1S12S, 4DHV1S18S



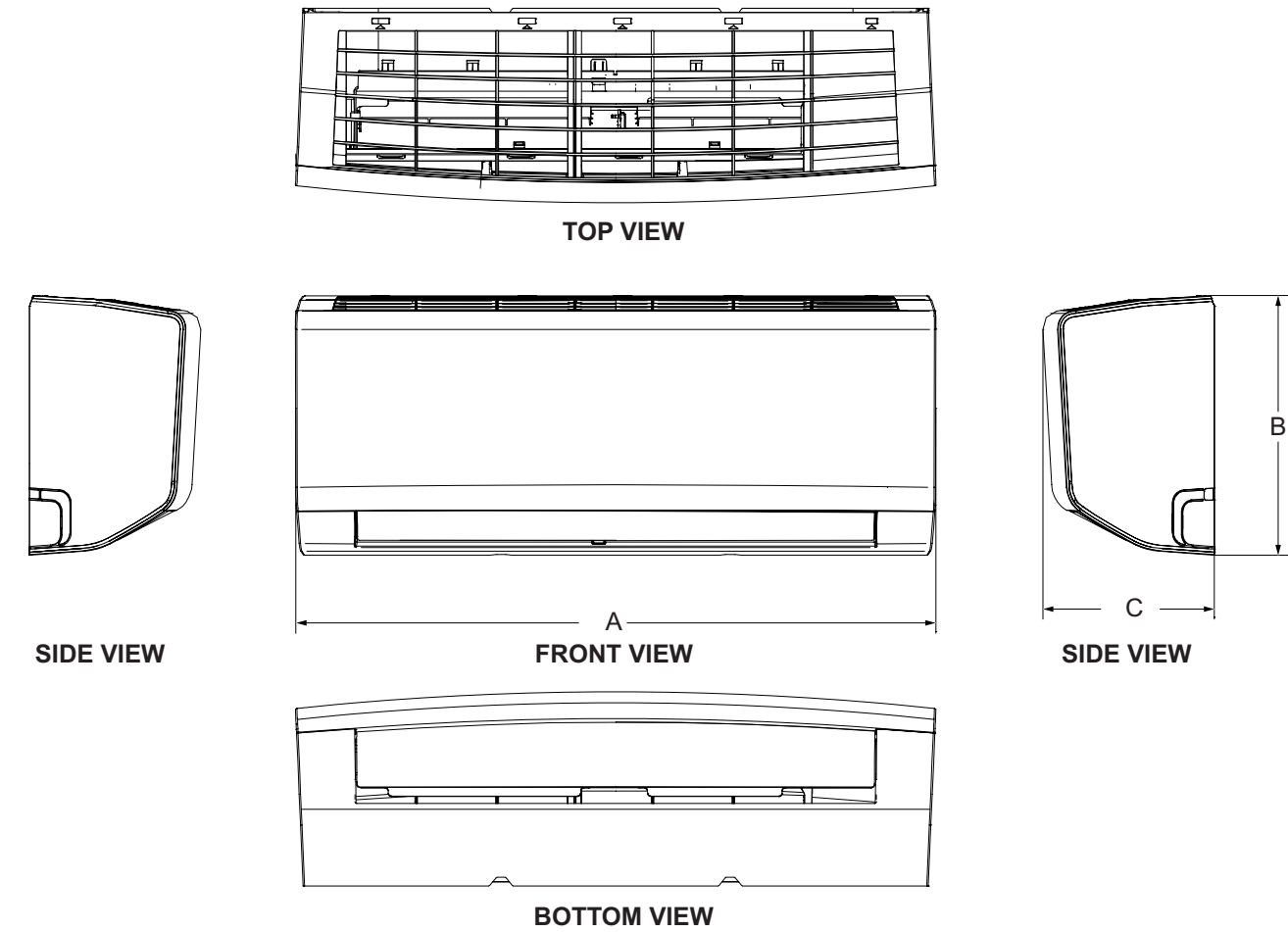
4DHV1S24S



4DHV1S36S

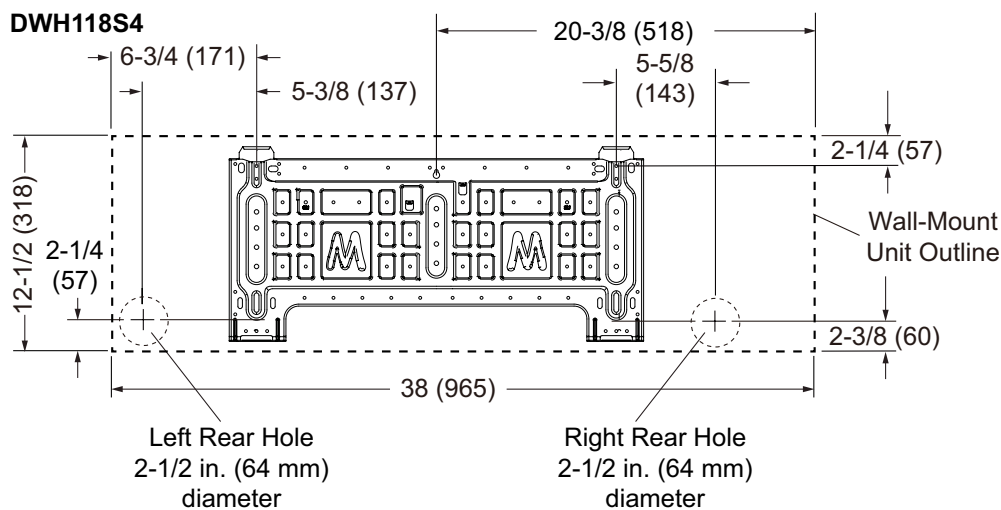
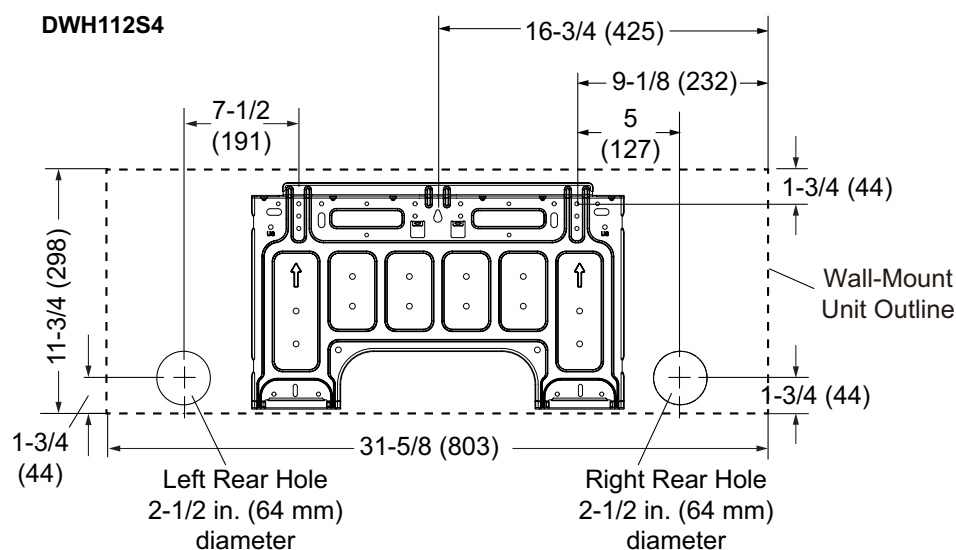
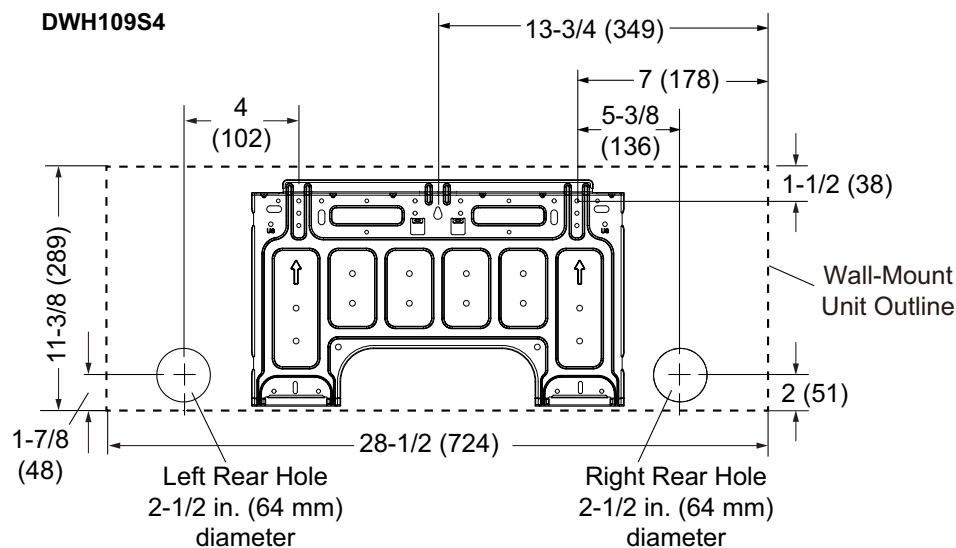


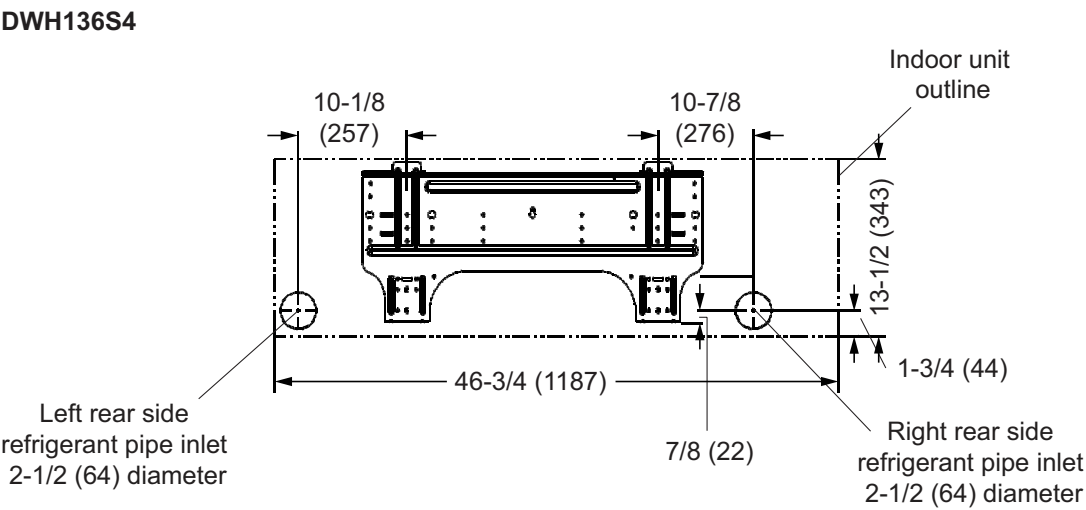
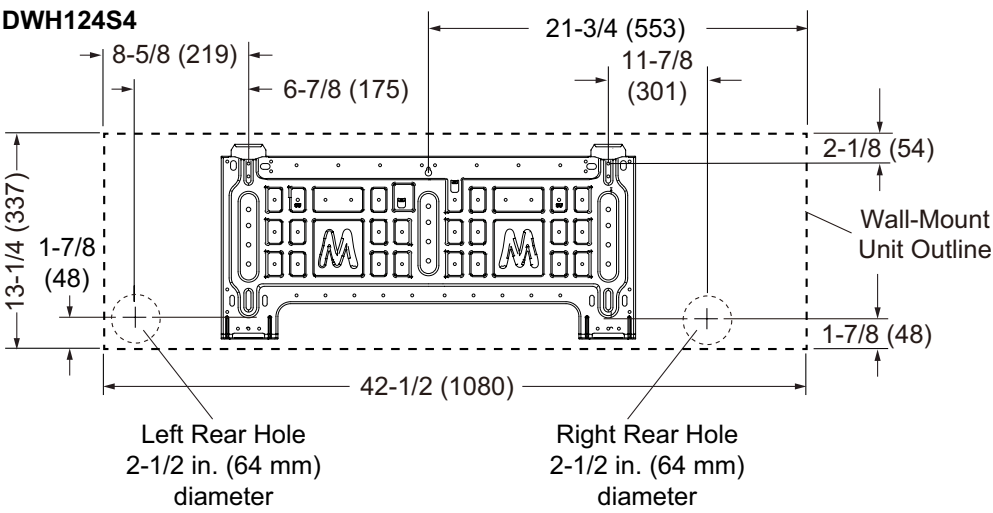
DIMENSIONS - WALL MOUNTED INDOOR UNITS - INCHES (MM)

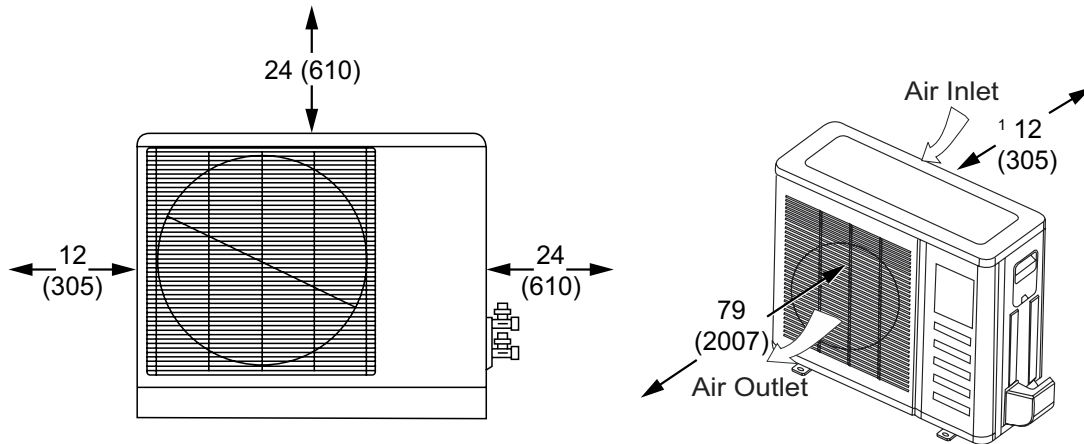


SIZE	A		B		C	
	IN.	MM	IN.	MM	IN.	MM
-09	29-5/8	752	11-3/8	289	8-5/8	219
-24	32-3/4	832	11-3/4	298	8-3/4	222
-18	39-1/8	994	12-1/2	318	9-7/8	251
-24	44	1118	13-1/4	337	10-1/4	260
-36	46-3/4	1187	13-1/2	343	10-1/4	260

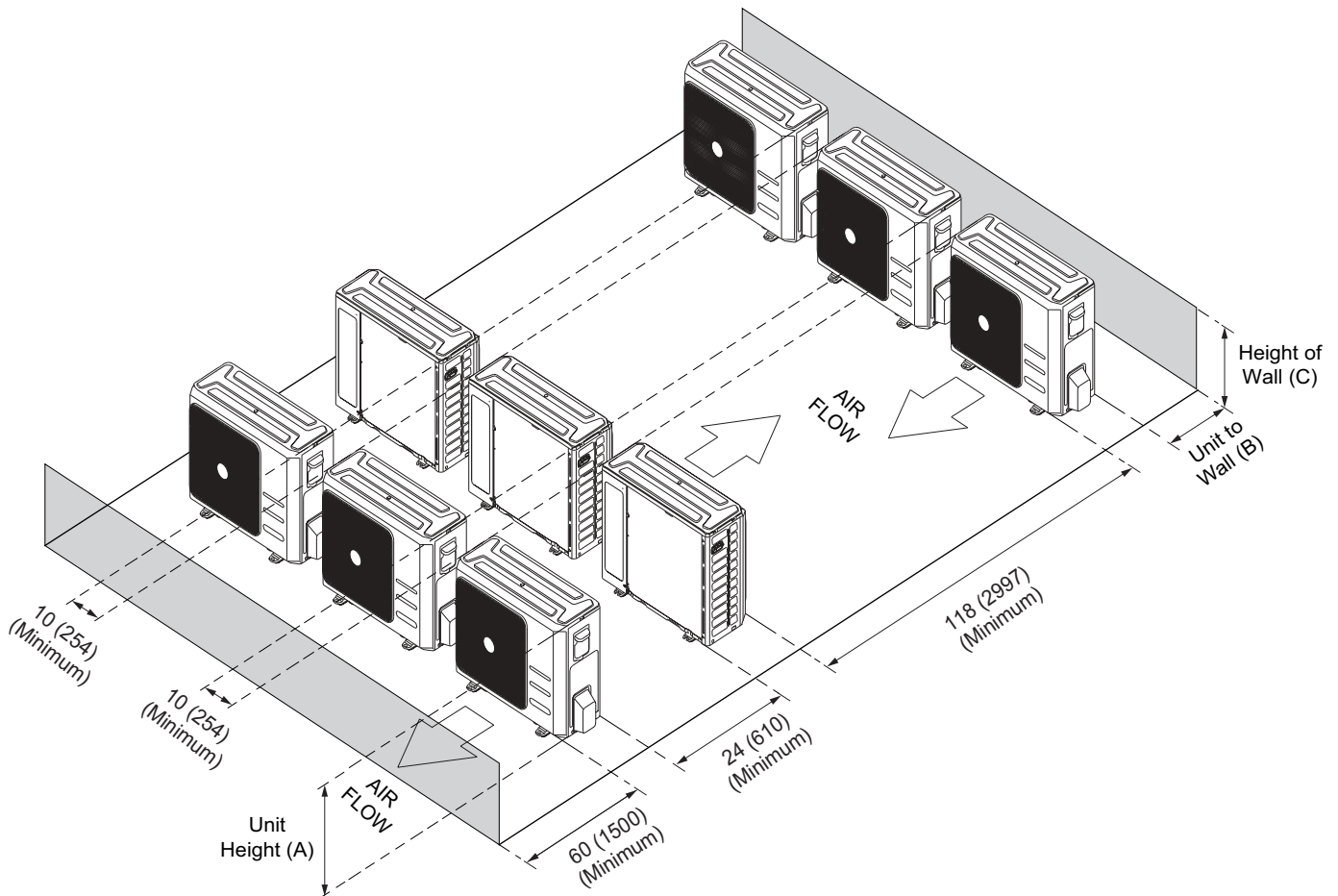
DIMENSIONS - WALL MOUNTED INDOOR UNITS - WALL PLATES - INCHES (MM)





INSTALLATION CLEARANCES - OUTDOOR UNITS - INCHES (MM)

¹ Minimum rear clearance can be 6 inches (152 mm) when mounted on brackets and with no obstructions on the other three sides.

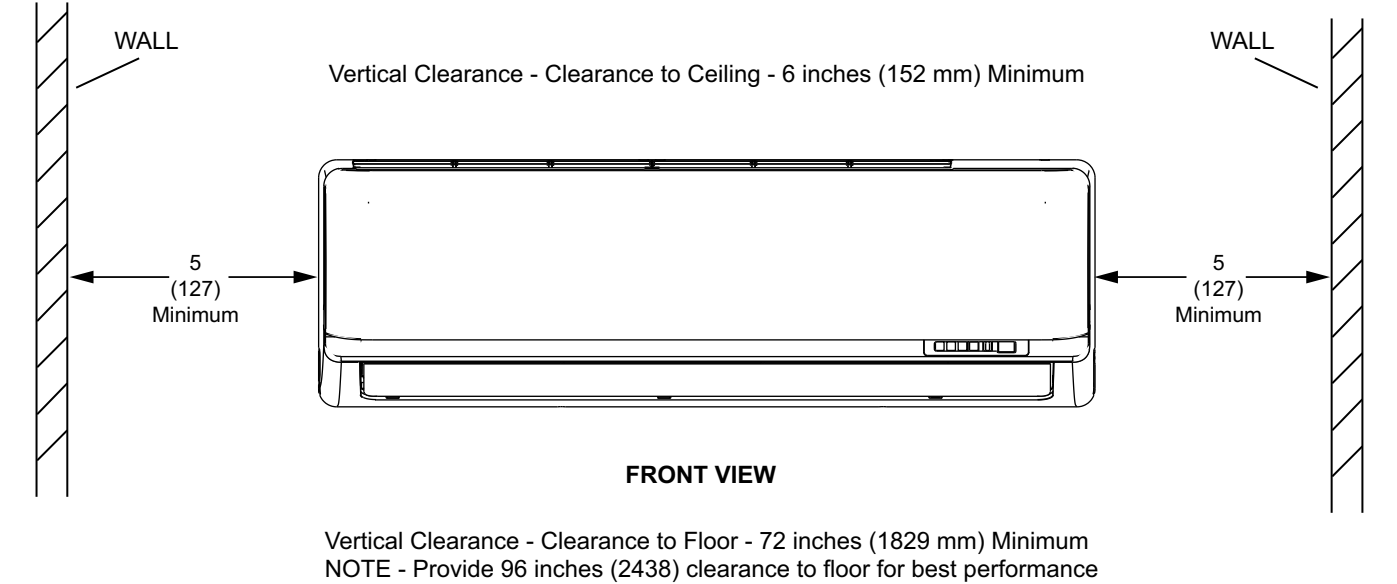
**CLEARANCE NOTES FOR MULTIPLE UNITS:**

If the height of the wall (C) is less than or equal to the height of the smallest unit (A), the distance from the unit to the wall (B) must be a minimum of 10 inches (254 mm).

If 1/2 the height of the unit (A) is less than the height of the wall (C), the distance from the unit to the wall (B) must be a minimum of 12 inches (305 mm).

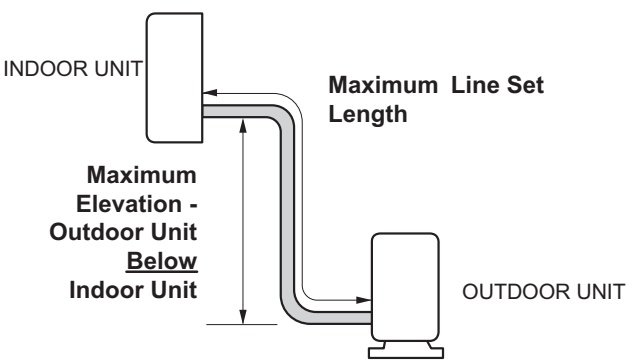
If the height of the wall (C) is greater than the height of the unit (A), the distance from the unit to the wall (B) must be a minimum of 20 inches (508 mm).

INSTALLATION CLEARANCES - WALL-MOUNTED INDOOR UNITS - INCHES (MM)

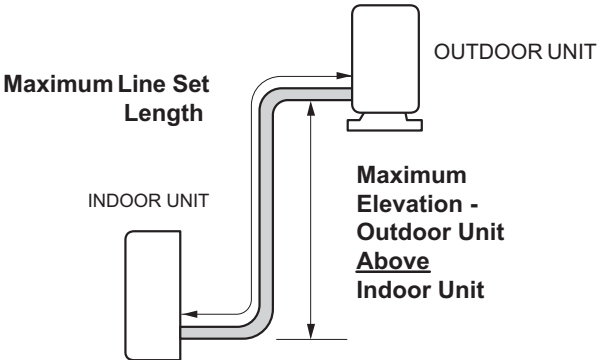


LINE SET AND ELEVATION GUIDELINES

Outdoor Unit BELOW Indoor Unit



Outdoor Unit ABOVE Indoor Unit



SIZE	LINE SET DIAMETERS (IN.)		MAXIMUM ELEVATION - OUTDOOR UNIT <u>BELOW</u> INDOOR UNIT FT. (M)	MAXIMUM ELEVATION - OUTDOOR UNIT <u>ABOVE</u> INDOOR UNIT FT. (M)	MAXIMUM LINE SET LENGTH FT. (M)
	LIQUID	GAS			
-09	1/4	3/8	33 ft. (10 m)	33 ft. (10 m)	82 ft. (25 m)
-12	1/4	1/2	33 ft. (10 m)	33 ft. (10 m)	82 ft. (25 m)
-18	1/4	1/2	66 ft. (20 m)	66 ft. (20 m)	98 ft. (30 m)
-24	3/8	5/8	66 ft. (20 m)	66 ft. (20 m)	98 ft. (30 m)
-36	3/8	5/8	98 ft. (30 m)	98 ft. (30 m)	213 ft. (65 m)

SPECIFICATIONS - OUTDOOR UNITS

MODEL NUMBER		4DHV1S09S		4DHV1S12S		4DHV1S18S		4DHV1S24S		4DHV1S36S	
NOMINAL SIZE- TONS		0.75		1		1.5		2		3	
AMBIENT TEMP. OPERATING RANGE-°F	COOLING	5 - 122								-13 - 122	
	HEATING	5 - 86								-13 - 86	
SOUND DATA	DBA	52		55		57.5		58		59	
REFRIGERANT	CHARGE FURNISHED (R410A) - OZ.	1lb. 14 oz.				2lbs. 12 oz.		3lbs. 15 oz.		7 lbs. 8 oz.	
	MAX LINE LENGTH - FT.	25									
	CHARGE REQUIRED/ ADDITIONAL FT. - OZ.	0.16						0.32			
COMPRESSOR	TYPE	(1) Rotary									
	REFRIGERANT OIL TYPE	Ester Oil VG74									
	REFRIGERANT OIL CHARGE - OZ.	10.5				14.9		22.7			
CONNECTIONS - IN.	LIQUID/GAS PIPE (FLARE)	1/4" / 3/8"		1/4" / 1/2"				3/8" / 5/8"			
	MAXIMUM REFRIGERANT PIPE LENGTH - FT.	82				98			213		
	MAX. DIFFERENCE IN LEVEL OF INDOOR UNIT - FT.	33				66			98		
OUTDOOR FAN	(NO.) DIAMETER - IN.	(1) 16-3/4		(1) 16-7/8				(1) 19-1/4		(1) 17	
	TOTAL AIR VOLUME - CFM	1175						1825		2130	
	RPM	800 / 650		800 / 650 (115V) 800 / 750 / 650 (208/230V)		800 / 750 / 650			900		
OUTDOOR COIL	NUMBER OF ROWS	1				2			3		
	FINS PER INCH	21								18	
	FIN TYPE	Hydrophilic Aluminum									
	TUBE OUTSIDE DIAMETER - IN.	1/4								5/16	
	TUBE TYPE	Rifled Copper Tubing									
	NET FACE AREA - SQ. FT.	4.04		4.72		4.67		5.12		8.13	
	APPLICATION AREA - SQ. FT.	129 - 189		172 - 252		251 - 368		330 - 484		515 - 755	
DESIGN PRESSURE	PSIG	550/340									
NET/SHIPPING WEIGHT (LBS.)	115V	67 / 72		71 / 77		---		---		---	
	208/230V	67 / 72		67 / 73		80 / 86		106 / 113		146 / 158	
ELECTRICAL DATA											
ELECTRICAL CHAR. - 60 HZ - 1 PHASE		115V	208/230V	115V	208/230V	208/230V	208/230V	208/230V	208/230V	208/230V	208/230V
	MAXIMUM OVERCURRENT PROTECTION (AMPS)	20	15	20	15	20	20	25	25	35	35
	MINIMUM CIRCUIT AMPACITY	16	10	15				20		25	
	COMPRESSOR RATED LOAD AMPS	11.5	6.4	10.1	6.8	10	15	15	17	17	17
OUTDOOR FAN MOTOR	RATED LOAD AMPS	0.6	0.5	0.55	0.45	0.5	0.6				
	OUTPUT - W	34					115			120	

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

1 HACR type circuit breaker or fuse.

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

SPECIFICATIONS - WALL MOUNTED INDOOR UNITS

MODEL NUMBER		DWH109S4		DWH112S4		DWH118S4	DWH124S4	DWH136S4
NOMINAL SIZE- TONS		0.75		1		1.5	2	3
ELECTRICAL CHAR.	60 HZ - 1 PHASE	115V	208/230V	115V	208/230V	208/230V	208/230V	208/230V
	RATED LOAD AMPS	0.7	0.06	0.7	0.06	0.11	0.37	0.5
	INPUT (W)	35.2	50	35.2	50	36	116	72
	OUTPUT (W)	20				30	60	
ROOM TEMP RANGE (°F)	COOLING	62 - 90						
	HEATING	32 - 86						
AIR VOLUME (CFM)	HIGH/MED/LOW	247/182/129	309/285/187	294/212/171	324/282/212	449/393/262	706/588/450	794/647/500
SOUND DATA (DBA)	HIGH/MED/LOW	38 / 32 / 25		38 / 30 / 28	38 / 32 / 24	43 / 35 / 30.5	48 / 42.5 / 34	48.5 / 44 / 38
CONNECTIONS (IN.)	LIQUID/GAS - O.D. - FLARE	1/4" / 3/8"		1/4" / 1/2"		1/4" / 1/2"	3/8" / 5/8"	
	DRAIN - O.D.	1						0.69
WEIGHT (LBS.)	NET/ PACKAGING	18 / 23		19 / 25		25 / 33	31 / 40	40 / 50

AHRI SYSTEM MATCHES

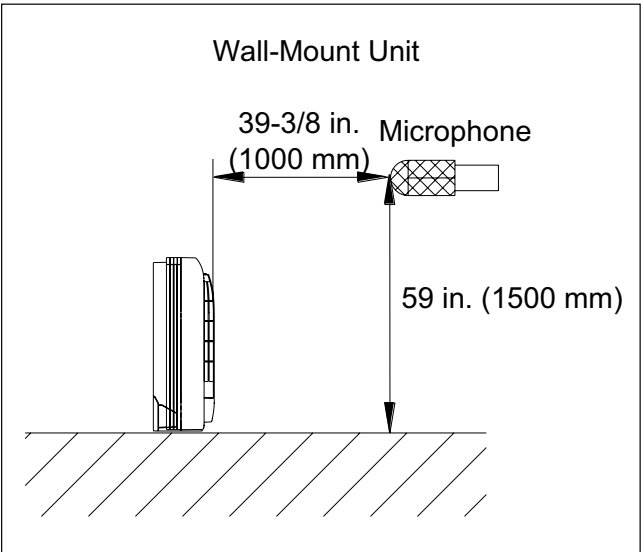
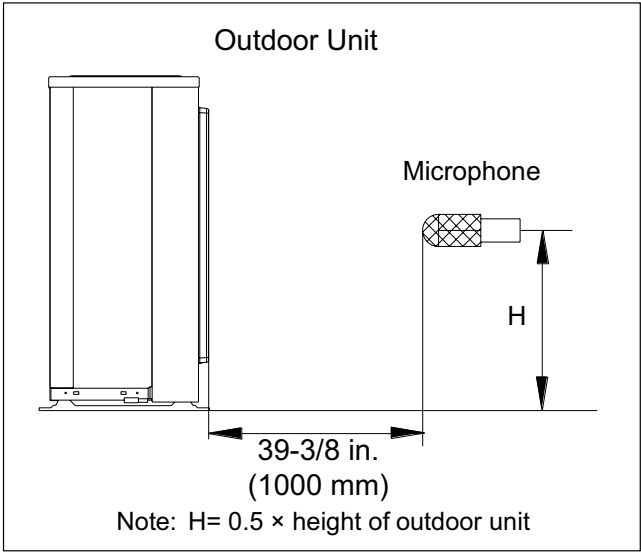
INDOOR UNIT TYPE	OUTDOOR UNIT	INDOOR UNIT	COOLING CAPACITY	SEER	EER	HEAT CAPACITY 47F	HSPF (IV)
WALL-MOUNTED NON-DUCTED	4DHVIS09S-1L	DWH109S4-1L	9000	19	11.5	10000	10
	4DHVIS09S-1P	DWH109S4-1P	9000	18	11	9000	9.5
	4DHVIS12S-1L	DWH112S4-1L	12000	19	10.5	12000	9.5
	4DHVIS12S-1P	DWH112S4-1P	12000	19	11	12000	9.5
	4DHVIS18S-1P	DWH118S4-1P	18000	19	11	18000	10
	4DHVIS24S-1P	DWH124S4-1P	24000	17	9.5	24000	9.5
	4DHVIS36S-1P	DWH136S4-1P	36000	16	8.6	36000	8.5

Ratings are AHRI certified to AHRI Standard 210/240-2008

- Cooling Ratings - 80°F dry bulb/67°F wet bulb entering indoor coil air and 95°F wet bulb/75°F dry bulb outdoor air temperature.
- High Temperature Heating Ratings - 70°F dry bulb/60°F wet bulb entering indoor coil air and 47°F dry bulb/43°F wet bulb outdoor air temperature.
- Low Temperature Heating Ratings - 70°F dry bulb/60°F wet bulb entering indoor coil air and 17°F dry bulb/15°F wet bulb outdoor air temperature.

To convert HSPF from Region IV to Region V - Divide by 1.15.

SOUND LEVELS - TEST CONDITIONS



COOLING CAPACITY - 09 (115V)

OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB / WET BULB)							
	65°F / 54°F		70°F / 59°F		75°F / 63°F		80°F / 67°F	
	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH
-13	7.47	5.29	7.90	5.59	8.29	5.97	8.64	6.22
-5	7.99	5.63	8.45	5.96	8.96	6.53	9.29	6.61
-4	8.25	5.69	8.72	6.01	9.05	6.25	9.48	6.45
0	8.73	5.94	9.13	6.21	9.63	6.55	9.98	6.73
5	8.99	6.21	9.56	6.61	9.93	6.82	10.39	7.17
15	9.03	6.39	9.61	6.80	10.08	7.19	10.50	7.42
25	9.22	6.54	9.65	6.84	10.23	7.28	10.60	7.60
35	9.37	6.57	9.74	6.84	10.23	7.26	10.71	7.56
45	9.30	6.85	9.95	7.33	10.43	7.80	10.81	7.94
55	9.50	7.33	9.99	7.71	10.43	7.90	10.92	8.27
65	9.65	6.82	10.14	7.17	10.64	7.52	11.02	7.79
75	9.57	6.88	10.18	7.32	10.63	7.64	11.13	8.00
85	9.77	7.12	10.22	7.44	10.78	7.85	11.23	8.18
95	9.89	6.94	10.35	7.25	10.91	7.65	11.31	7.93
105	9.29	6.74	9.78	7.09	10.26	7.44	10.74	7.79
110	8.59	6.70	9.09	7.09	9.64	7.52	9.99	7.79
115	8.08	6.87	8.55	7.27	8.87	7.54	9.29	7.90
122	7.48	6.66	7.78	6.92	8.16	7.26	8.55	7.61

HEATING CAPACITY - 09 (115V)

OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB)			
	60°F	65°F	70°F	75°F
	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH
-13	4.49	4.34	4.11	3.94
-5	5.45	5.30	5.01	4.83
0	6.20	6.01	5.69	5.46
5	6.90	6.70	6.32	6.07
17	8.23	7.95	7.53	7.26
19.4	8.57	8.23	7.83	7.55
24.8	8.97	8.62	8.19	7.86
32	9.33	9.01	8.54	8.20
35	9.68	9.35	8.84	8.53
39.2	10.50	10.21	9.64	9.16
44.6	11.71	11.39	10.74	10.21
47	12.79	12.33	11.68	11.03
53.6	13.77	13.28	12.56	12.00
57	14.21	13.76	13.00	12.48

COOLING CAPACITY - 09 (208/230V)

OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB / WET BULB)							
	65°F / 54°F		70°F / 59°F		75°F / 63°F		80°F / 67°F	
	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH
-13	7.13	5.07	7.38	5.22	7.97	5.67	8.43	5.94
-5	7.62	5.45	7.98	5.74	8.62	6.16	9.07	6.47
-4	7.73	5.65	8.19	5.96	8.79	6.43	9.25	6.71
0	8.13	5.71	8.52	5.98	9.35	6.57	9.74	6.82
5	8.42	6.03	8.93	6.47	9.64	6.91	10.15	7.26
15	8.50	6.22	9.12	6.74	9.89	7.24	10.30	7.54
25	8.73	5.94	9.20	6.20	9.93	6.76	10.46	7.04
35	8.97	6.18	9.39	6.44	10.08	6.95	10.61	7.33
45	9.04	6.17	9.42	6.45	10.23	6.98	10.77	7.31
55	9.12	6.63	9.61	6.99	10.49	7.62	10.92	7.90
65	9.25	6.74	9.75	7.10	10.52	7.66	11.08	8.07
75	9.50	6.66	9.95	6.97	10.62	7.45	11.24	7.88
85	9.58	6.81	10.04	7.09	10.84	7.71	11.41	8.04
95	9.71	7.15	10.29	7.58	10.99	8.09	11.62	8.69
105	9.12	7.12	9.62	7.50	10.38	8.10	10.93	8.52
110	8.58	7.29	9.09	7.73	9.71	8.25	10.27	8.73
115	8.01	7.13	8.50	7.56	9.17	8.16	9.66	8.59
122	7.43	6.83	7.87	7.24	8.54	7.85	8.89	8.18

HEATING CAPACITY - 09 (208/230V)

OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB)			
	60°F	65°F	70°F	75°F
	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH
-13	5.86	5.67	5.37	5.12
-5	6.98	6.75	6.39	6.10
0	8.10	7.84	7.41	7.11
5	8.96	8.69	8.23	7.94
17	10.80	10.48	9.91	9.52
19.4	10.86	10.53	9.96	9.56
24.8	10.94	10.61	10.02	9.67
32	10.98	10.67	10.07	9.56
35	11.10	10.73	10.16	9.60
39.2	11.61	11.23	10.62	10.14
44.6	12.56	12.14	11.47	11.01
47	13.11	12.58	11.96	11.54
53.6	13.55	13.00	12.35	11.86
57	13.82	13.34	12.66	12.03

COOLING CAPACITY - 12 (115V)

OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB / WET BULB)							
	65°F / 54°F		70°F / 59°F		75°F / 63°F		80°F / 67°F	
	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH
-13	9.07	6.41	9.59	6.78	10.06	7.25	10.48	7.55
-5	9.69	6.84	10.26	7.23	10.88	7.92	11.27	8.02
-4	10.01	6.90	10.58	7.29	10.98	7.58	11.50	7.82
0	10.59	7.21	11.08	7.54	11.68	7.95	12.11	8.16
5	10.91	7.54	11.60	8.02	12.04	8.28	12.61	8.70
15	10.99	7.78	11.69	8.28	12.26	8.75	12.77	9.03
25	11.24	7.97	11.76	8.34	12.47	8.88	12.92	9.25
35	11.46	8.04	11.92	8.36	12.51	8.88	13.10	9.25
45	11.36	8.37	12.15	8.95	12.75	9.53	13.21	9.70
55	11.55	8.91	12.14	9.37	12.68	9.60	13.27	10.05
65	11.52	8.14	12.12	8.56	12.71	8.98	13.17	9.31
75	11.53	8.29	12.26	8.82	12.80	9.20	13.40	9.64
85	11.28	8.22	11.80	8.59	12.45	9.07	12.97	9.44
95	10.96	7.69	11.46	8.04	12.09	8.48	12.53	8.78
105	10.08	7.31	10.60	7.69	11.13	8.07	11.65	8.45
110	9.27	7.23	9.81	7.65	10.40	8.11	10.78	8.41
115	8.72	7.41	9.22	7.84	9.57	8.14	10.02	8.52
122	7.98	7.10	8.30	7.39	8.71	7.75	9.12	8.12

HEATING CAPACITY - 12 (115V)

OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB)			
	60°F	65°F	70°F	75°F
	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH
-13	4.66	4.51	4.24	4.07
-5	5.56	5.38	5.05	4.87
0	6.41	6.21	5.82	5.59
5	7.13	6.89	6.47	6.21
17	8.50	8.21	7.70	7.39
19.4	8.96	8.70	8.15	7.86
24.8	9.70	9.42	8.81	8.37
32	10.42	10.05	9.46	8.94
35	11.21	10.81	10.16	9.71
39.2	11.75	11.36	10.66	10.18
44.6	12.65	12.22	11.46	11.01
47	13.37	12.90	12.11	11.69
53.6	13.94	13.51	12.67	12.23
57	14.37	13.92	13.05	12.53

COOLING CAPACITY - 12 (208/230V)

OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB / WET BULB)							
	65°F / 54°F		70°F / 59°F		75°F / 63°F		80°F / 67°F	
	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH
-13	8.64	5.88	9.05	6.16	9.68	6.59	10.35	7.04
-5	9.24	6.38	9.68	6.69	10.46	7.23	11.13	7.69
-4	9.37	6.63	9.82	6.96	10.73	7.60	11.35	8.04
0	9.98	7.08	10.28	7.29	11.23	7.97	11.95	8.47
5	10.33	7.43	10.89	7.83	11.77	8.46	12.45	8.95
15	10.35	7.54	10.92	7.95	11.73	8.55	12.55	9.14
25	10.44	7.32	10.95	7.67	11.90	8.34	12.66	8.87
35	10.68	7.74	11.13	8.07	12.08	8.76	12.79	9.27
45	10.64	7.86	11.09	8.20	12.05	8.91	12.82	9.48
55	10.78	7.84	11.24	8.17	12.35	8.98	13.07	9.50
65	11.06	8.05	11.66	8.49	12.59	9.17	13.32	9.70
75	11.20	7.85	11.81	8.28	12.69	8.90	13.57	9.51
85	11.40	8.06	11.96	8.45	12.99	9.18	13.82	9.77
95	11.60	9.05	12.16	9.49	13.29	10.36	14.06	10.97
105	10.84	9.00	11.29	9.37	12.20	10.13	12.98	10.77
110	9.25	7.87	9.65	8.20	10.54	8.96	11.15	9.48
115	8.56	7.61	8.92	7.94	9.75	8.68	10.37	9.23
122	7.92	7.21	8.25	7.51	9.02	8.20	9.54	8.68

HEATING CAPACITY - 12 (208/230V)

OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB)			
	60°F	65°F	70°F	75°F
	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH
-13	5.93	5.69	5.45	5.24
-5	7.06	6.78	6.49	6.27
0	7.86	7.54	7.21	6.89
5	8.74	8.38	8.02	7.70
17	10.26	9.86	9.43	8.96
19.4	10.98	10.54	10.08	9.68
24.8	11.93	11.45	10.94	10.56
32	12.86	12.36	11.79	11.26
35	13.65	13.09	12.50	12.00
39.2	14.09	13.58	12.96	12.50
44.6	15.08	14.54	13.86	13.30
47	15.79	15.17	14.50	13.78
53.6	16.37	15.73	15.02	14.20
57	16.88	16.22	15.47	14.70

COOLING CAPACITY - 18 (208/230V)

OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB / WET BULB)							
	65°F / 54°F		70°F / 59°F		75°F / 63°F		80°F / 67°F	
	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH
-13	14.50	10.01	15.34	10.60	15.84	10.95	16.86	11.65
-5	15.50	10.98	16.40	11.62	17.13	12.13	18.12	12.84
-4	15.72	10.64	16.64	11.27	17.57	11.89	18.49	12.52
0	16.28	11.85	17.24	12.55	18.20	13.25	19.26	14.02
5	16.98	12.31	17.97	13.03	18.87	13.67	19.86	14.39
15	17.00	12.75	18.00	13.50	18.90	14.18	20.00	15.00
25	16.68	11.92	17.96	12.83	18.75	13.40	19.74	14.10
35	16.75	11.75	17.63	12.36	18.40	12.91	19.48	13.66
45	16.54	12.04	17.41	12.67	18.38	13.37	19.35	14.08
55	16.33	11.84	17.20	12.46	18.06	13.09	19.22	13.93
65	16.13	11.60	17.27	12.42	18.04	12.97	19.09	13.72
75	16.21	11.80	17.06	12.43	18.01	13.12	18.96	13.81
85	16.00	11.82	16.85	12.45	17.79	13.15	18.83	13.91
95	15.81	12.49	16.93	13.38	17.78	14.04	18.71	14.78
105	15.36	12.44	16.17	13.09	16.97	13.75	17.96	14.55
110	14.35	11.91	15.28	12.68	16.04	13.31	16.89	14.01
115	13.34	12.01	14.21	12.79	14.84	13.36	15.79	14.21
122	12.42	11.55	13.00	12.09	13.73	12.76	14.52	13.51

HEATING CAPACITY - 18 (208/230V)

OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB)			
	60°F	65°F	70°F	75°F
	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH
-13	6.96	6.69	6.46	6.27
-5	8.30	7.97	7.69	7.38
0	9.23	8.82	8.55	8.25
5	10.25	9.81	9.50	9.21
17	11.92	11.42	11.04	10.54
19.4	12.40	11.90	11.49	10.97
24.8	13.12	12.60	12.15	11.67
32	13.84	13.29	12.80	12.29
35	14.77	14.23	13.70	13.22
39.2	16.28	15.58	15.05	14.45
44.6	18.33	17.54	16.93	16.08
47	19.81	18.88	18.28	17.27
53.6	21.20	20.20	19.54	18.56
57	21.79	20.85	20.12	19.32

COOLING CAPACITY - 24 (208/230V)

OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB / WET BULB)							
	65°F / 54°F		70°F / 59°F		75°F / 63°F		80°F / 67°F	
	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH
-13	18.76	14.06	19.78	14.81	20.90	15.83	22.47	17.19
-5	20.06	15.12	21.38	16.13	22.59	16.80	24.16	18.14
-4	20.34	14.76	21.94	15.92	23.05	16.73	24.66	18.10
0	21.23	15.30	22.75	16.40	23.64	17.06	25.42	18.33
5	21.53	17.12	23.08	18.36	24.25	19.25	25.94	20.46
15	21.18	17.10	22.98	18.55	24.01	19.29	25.68	20.55
25	21.22	16.54	22.36	17.43	23.63	18.36	25.41	19.45
35	20.90	16.27	22.29	17.35	23.55	18.34	25.18	19.31
45	20.59	15.52	22.21	16.75	23.33	17.59	24.95	18.82
55	20.64	14.98	22.13	16.06	22.99	16.68	24.72	17.94
65	20.33	14.66	21.80	15.72	22.90	16.51	24.49	17.66
75	20.02	15.92	21.72	17.27	22.69	18.04	24.26	19.30
85	20.17	16.28	21.25	17.16	22.46	18.13	24.15	19.50
95	19.95	15.55	21.28	16.58	22.48	17.52	24.04	18.73
105	18.94	14.75	20.43	15.91	21.47	16.71	22.96	17.88
110	18.02	14.67	19.32	15.72	20.18	16.34	21.58	17.33
115	16.75	15.44	17.96	16.56	18.77	17.08	20.18	18.29
122	15.32	14.68	16.62	15.93	17.36	16.64	18.56	17.80

HEATING CAPACITY - 24 (208/230V)

OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB)			
	60°F	65°F	70°F	75°F
	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH
-13	12.34	11.86	11.47	11.07
-5	14.70	14.13	13.65	13.04
0	16.35	15.71	15.17	14.48
5	17.95	17.20	16.67	16.00
17	21.14	20.26	19.61	18.53
19.4	21.54	20.60	19.96	18.96
24.8	22.07	21.09	20.44	19.52
32	22.55	21.59	20.90	20.06
35	23.23	22.24	21.51	20.75
39.2	25.25	24.15	23.36	22.42
44.6	28.28	27.15	26.24	25.32
47	29.63	28.33	27.46	26.36
53.6	30.72	29.39	28.45	27.02
57	31.83	30.44	29.44	27.82

COOLING CAPACITY - 36 (208/230V)

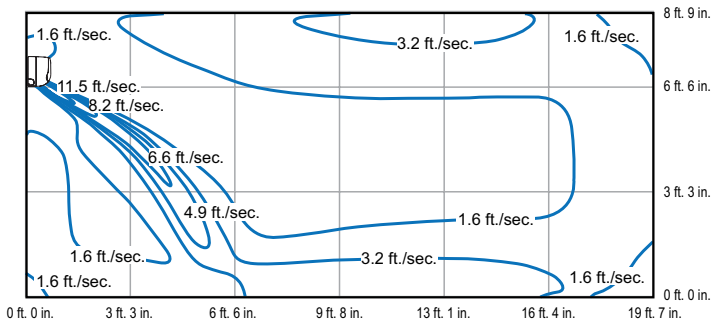
OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB / WET BULB)							
	65°F / 54°F		70°F / 59°F		75°F / 63°F		80°F / 67°F	
	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH	TOTAL MBTUH	SENSIBLE MBTUH
-13	28.48	25.99	29.62	26.67	30.37	27.58	30.86	28.29
-5	30.31	27.45	30.83	28.06	32.02	28.64	32.55	28.92
0	30.48	27.83	31.70	28.68	32.20	29.10	32.74	29.88
5	31.32	28.03	31.73	28.29	32.52	29.63	33.99	30.40
15	31.35	28.12	32.08	29.21	33.03	30.55	34.10	30.85
25	31.39	28.18	31.83	29.05	33.06	30.67	34.50	30.98
35	31.45	28.58	32.27	29.21	33.52	30.94	35.17	31.42
45	32.09	28.28	33.09	28.90	33.91	30.62	35.27	31.63
55	31.71	28.94	32.40	29.32	33.79	30.79	35.65	31.42
65	30.85	28.34	32.33	29.73	32.81	30.47	34.97	32.32
75	30.67	28.48	31.90	29.24	32.70	30.49	35.08	32.07
85	30.14	27.66	30.80	28.53	31.57	28.99	35.31	32.42
95	29.02	26.72	29.78	27.92	30.53	28.11	36.52	33.35
105	25.83	23.85	26.87	24.35	27.54	25.15	34.07	28.73
110	24.33	22.02	25.08	23.08	26.26	23.83	30.70	26.02
115	23.30	21.44	24.43	22.29	25.04	22.66	29.36	24.22
122	23.05	20.03	23.77	21.10	24.36	22.05	28.94	23.87

HEATING CAPACITY - 36 (208/230V)

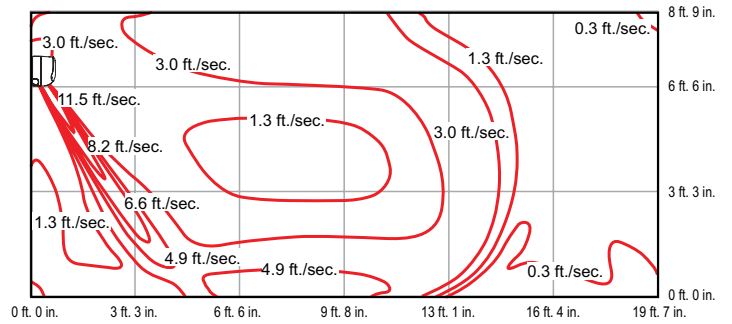
OUTDOOR TEMPERATURE - °F (DRY BULB)	INDOOR TEMPERATURE - °F (DRY BULB)			
	60°F	65°F	70°F	75°F
	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH	TOTAL MBTUH
-13	17.74	16.76	15.74	14.74
-5	20.09	19.08	18.08	17.08
0	24.16	23.16	22.16	21.15
5	25.14	24.18	23.14	22.14
17	26.16	25.18	24.12	23.16
19.4	27.96	26.94	24.72	23.78
24.8	30.46	28.23	27.23	26.28
32	31.75	30.70	29.70	28.75
35	34.22	33.22	32.22	31.27
39.2	36.72	34.57	34.78	33.80
44.6	38.10	37.13	36.10	35.13
47	39.49	38.59	37.56	36.49
53.6	39.70	38.73	37.70	36.70
57	39.85	38.88	37.85	36.91

AIR THROW DATA - WALL-MOUNTED INDOOR UNITS

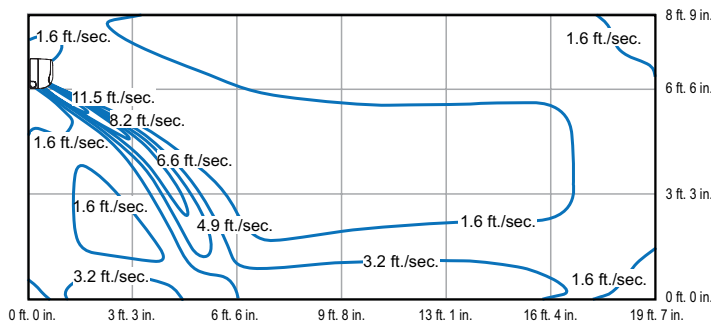
DWH109S4 - COOLING



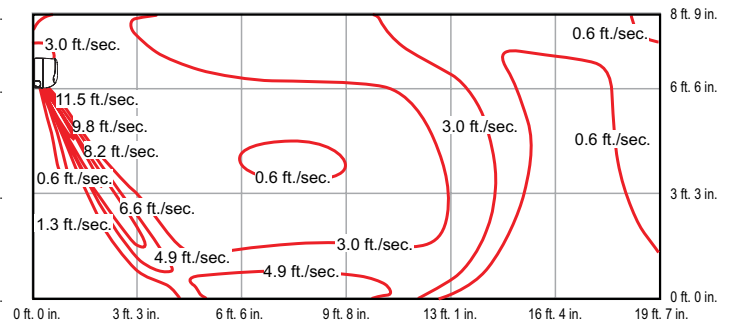
DWH109S4 - HEATING



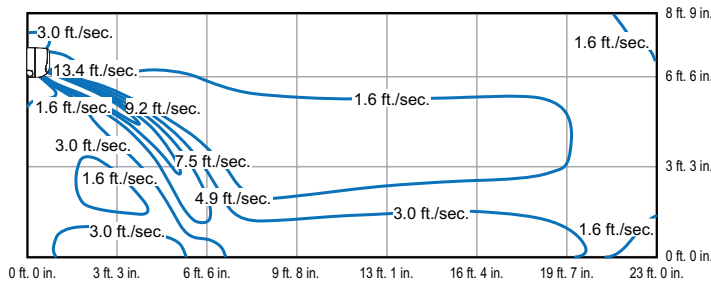
DWH112S4 - COOLING



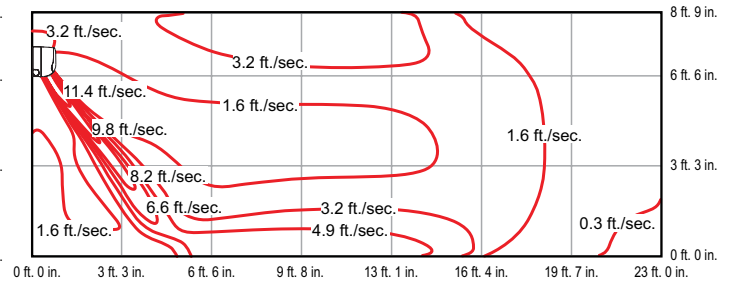
DWH112S4 - HEATING



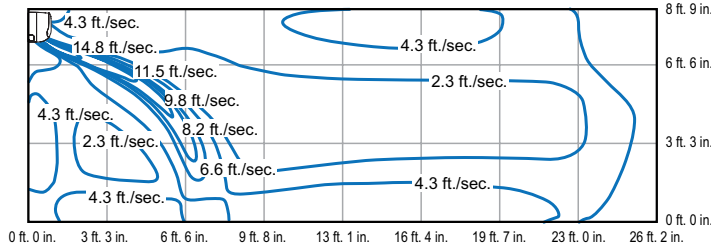
DWH118S4 - COOLING



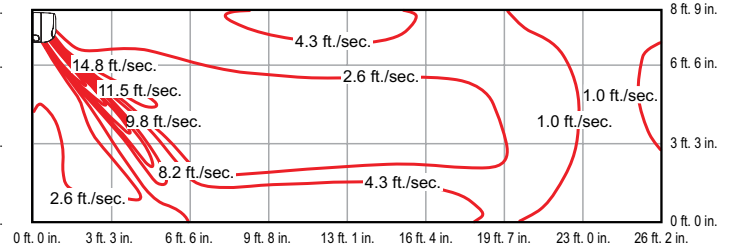
DWH118S4 - HEATING



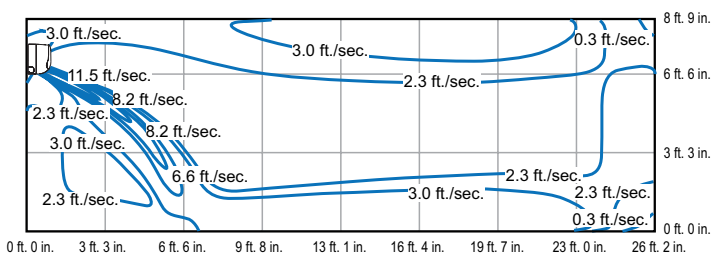
DWH124S4 - COOLING



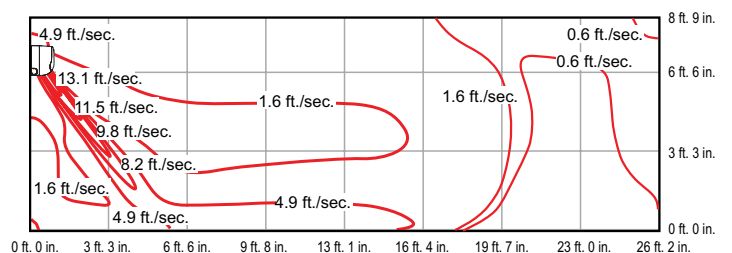
DWH124S4 - HEATING



DWH136S4 - COOLING



DWH136S4 - HEATING



ACCESSORIES - FURNISHED

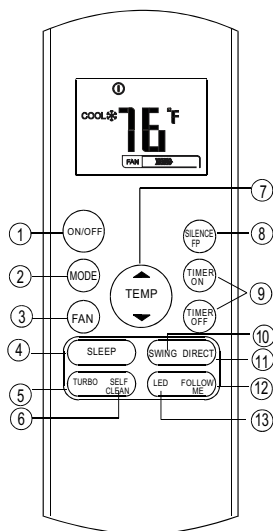
WIRELESS REMOTE CONTROLLER

Furnished with Wall-Mounted Indoor Units.

Complete remote control of system. Maximum operating range is 25 ft.

Operates on two AAA 1.5V batteries (furnished).

Wireless remote controller holder furnished. Holder can be mounted on a wall for easy access. Mounting screws furnished.

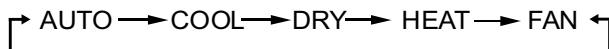


1 ON/OFF Button

Turns system on and off.

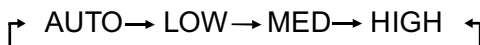
2 MODE Button

Select system operation modes. Push button to cycle through each setting.



3 FAN Button

Select fan speed. Push button to cycle through each setting.



NOTE - Not available in AUTO or DRY modes.

4 SLEEP Button

Enables the system to automatically increase cooling or decrease heating (in 2°F increments) per hour for the first 2 hours, then maintain a steady temperature for 5 hours. System reverts back to previous operation mode after 7 total hours of operation.

NOTE - To cancel, push the "MODE", "FAN SPEED" or "ON/OFF" buttons.

NOTE - SLEEP mode is only available when the unit is in COOL, HEAT or AUTO mode.

5 TURBO Button

Enables the unit to reach the preset temperature during cooling or heating operation in the shortest time.

6 SELF CLEAN Button

Automatically cleans and dries the evaporator coil at the end of the cooling season, preventing any odors or mildew.

7 UP/DOWN Buttons ▲ ▼

Increase or decrease the indoor temperature in one degree increments (maximum 86°F, minimum 62°F).

NOTE - Temperature cannot be adjusted in FAN mode.

NOTE - Press and hold buttons together for 3 seconds to alternate the temperature display between the °C and °F scale.

8 SILENCE/FP Button

Silence - Operates the compressor at low frequency and low fan speed to reduce operating sound levels to a minimum.

FP - Only available during heating operation. Unit will operate at a set temperature of 46°F.

NOTE - To cancel, push the "ON/OFF", "SLEEP", "FP", "MODE", "FAN SPEED", "UP/DOWN" buttons.

9 TIMER ON / TIMER OFF Buttons

TIMER ON (initiates an auto-on time sequence) and TIMER OFF (initiates an auto-off time sequence) can be used separately or together. Each press of the button increases the time in 30 minute increments up to 10 hours. Above 10 hours each press of the button will increase the auto-timed setting by 60 minutes up to 24 hours.

NOTE - To cancel, set timer to 0.0 or turn remote off and on.

10 SWING Button

Used to stop or start horizontal louver auto swing feature.

11 DIRECT Button

Used to change the louver movement and set the desired up/down air flow direction.

The louver angle changes 6° for each press of the button.

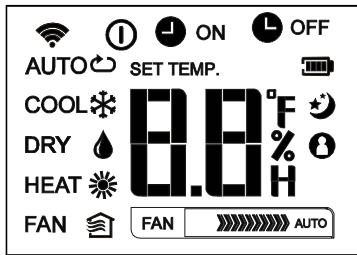
12 FOLLOW ME Button

Allows remote temperature sensing of the room at the remote controller location.

13 LED Button

Turns the LCD display backlight on the indoor unit on or off.

WIRELESS REMOTE CONTROLLER OPERATION



Mode display

AUTO COOL DRY
HEAT FAN

- Displayed when data transmitted.
- Displayed when remote controller is ON.
- Battery display (low battery detection)

- ON Displayed when TIMER ON time is set.
- OFF Displayed when TIMER OFF time is set.
- Show set temperature or room temperature, or time under TIMER setting.

- Displayed in Sleep Mode operation.
- Indicated that the air conditioner is operating in Follow me mode

Fan speed indication

- FAN Low speed
- FAN Medium speed
- FAN High speed
- FAN AUTO Auto fan speed

Note - During unit operation only the active functions will be shown on the display.

Auto Operation

1. Press the **MODE** button to select Auto.
2. Press the **UP/DOWN** button to set the desired temperature. The temperature can be set within a range of
3. Press the **ON/OFF** button to start the air conditioner.

Cooling /Heating/Fan Operation

1. Press the **MODE** button to select **COOL**, **HEAT** or **FAN** mode.
2. Press the **UP/DOWN** buttons to set the desired temperature.
3. Press the **FAN** button to select the fan speed in four steps- Auto, Low, Med, or High.
4. Press the **ON/OFF** button to start the air conditioner.

Dehumidifying Operation

1. Press the **MODE** button to select **DRY** mode.
2. Press the **UP/DOWN** buttons to set the desired temperature.
3. Press the **ON/OFF** button to start the air conditioner.

Timer ON/OFF Operation

1. Press the **TIMER ON** or **TIMER OFF** button. The remote controller shows TIMER ON or TIMER OFF icon, the previous Auto-on time setting and the signal "H" will be shown on the LCD display area.
2. Push the **TIMER ON** or **TIMER OFF** button again to set desired time. Each time you press the button, the time increases by 30 minutes between 0 and 10 hours and by 60 minutes between 10 and 24 hours.
3. After setting the **TIMER ON** or **TIMER OFF** there will be a one second delay before the remote controller transmits the signal to the unit. After approximately 2 seconds, the signal "H" will disappear and the set temperature will re-appear on the LCD display window.