iM Air Conditioners



WLA16AY

Cooling Efficiencies up to: 17 SEER2 / 12.0 EER2
Nominal Sizes: 2 to 5 Tons [7.0 to 17.6 kW]
Cooling Capacities: 22.8 kBTU to 56.0 kBTU [7.0 to 16.4 kW]
Refrigerant Type: R-454B

ISO 9001:2015

AHRI CERTIFIED
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Unitary Small AC
AHRI Standard 210/240

c UL us LISTED

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Features and Benefits

- **Swept Wing Fan Technology:** Features quieter operation and improved unit acoustics
- **7mm Condenser Copper Coil:** Requires less refrigerant allowing for a smaller and lighter footprint while enhancing reliability
- **Two-Stage Scroll Compressor:** Features two speeds (high and low) of cooling and heating, providing more precise temperature control, lower humidity and greater efficiency when compared to single-stage compressors
- **Expanded Valve Space:** 3 in. – 4 in. – 5 in. service valve space—provides a minimum working area of 27-square inches for easier access
- **Triple Service Access:** 15 in. wide, industry leading access, two fastener, removeable corner and individual louver panels—makes repairs faster and easier
- **Refrigerant Detection System™[1]*:** An integrated one-box, patented design featuring the A2L sensor and mitigation board, offering easier commissioning with a single component and simplified wiring configuration, compatibility with any 24V thermostat application and system protection by automatically pausing outdoor unit operation—if excess refrigerant is detected

[1]*Factory or field installed in the furnace coil or air handler and is applicable to the complete heating and cooling system featuring Low GWP Refrigerant (A2L).*

Air Conditioners

WL	A	16	A	Y	24	A	J	2	N	A
Brand	**Product Category**	**SEER2**	**Region**	**Refrigerant**	**Capacity BTU/HR**	**Major Series**	**Voltage**	**Type**	**Controls**	**Minor Series**
WL - Whirlpool	A - Air Conditioners	16 - 16 SEER2	A - All	Y - R-454B	24 - 24,000 [7.03 kW] 36 - 36,000 [10.55 kW] 48 - 48,000 [14.07 kW] 60 - 60,000 [17.58 kW]	A - 1st Design	J - 1ph, 208-230/60	2 - Two-Stage	N - Non-Communicating	A - 1st Design

[ ] Designates Metric Conversions

AVAILABLE MODELS
WLA16AY24AJ2NA
WLA16AY36AJ2NA
WLA16AY48AJ2NA
WLA16AY60AJ2NA

STANDARD EQUIPMENT
R-454B Refrigerant
Scroll Compressor
Field Installed Filter Drier
Front Seating Service Valves
Internal Pressure Relief Valve
Internal Thermal Overload
Long Line capability
High Pressure Control
Low Pressure Control
Low Ambient capability with Kit
3-4-5 Expanded Valve Space
Composite Basepan
2 Screw Control Box Access
Quick release louver panel design
No fasteners to remove along bottom
Optimized Venturi Airflow
Powder coated paint
Rust resistant screws
QR code
External gauge ports
Service trays

General Data

MODEL NO.	WLA16AY24	WLA16AY36	WLA16AY48	WLA16AY60
Nominal Tonnage	2.0	3.0	4.0	5.0
Valve Connections				
Liquid Line O.D. – in.	3/8	3/8	3/8	3/8
Suction Line O.D. – in.	3/4	3/4	7/8	7/8
Refrigerant (R-454B) furnished oz.[1]	103	109	133	189
Compressor Type	2-Stage Scroll			
Outdoor Coil				
Net face area – Outer Coil	13.3	16.4	19.5	27.9
Net face area – Inner Coil	12.9	15.9	18.8	27.1
Tube diameter – in.	0.276	0.276	0.276	0.276
Number of rows	2	2	2	2
Fins per inch	24	24	24	24
Outdoor Fan				
Diameter – in.	24	24	24	26
Number of blades	2	2	3	3
Motor hp	1/6	1/6	1/5	1/5
CFM	2723	3010	3606	4169
RPM	825	825	850	850
Watts	161	174	251	245
Shipping weight – lbs.	190	215	255	285
Operating weight – lbs.	184	208	248	277

Electrical Data

Line Voltage Data (Volts-Phase-Hz)	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60
Maximum overcurrent protection (amps)[2]	25	30	40	50
Minimum circuit ampacity[3]	16	20	26	29
Compressor				
Rated load amps	12	15	19	22
Locked rotor amps	65	90	138	149
Condenser Fan Motor				
Full load amps	0.8	0.8	1.0	1.0
Locked rotor amps	1.7	1.7	2.6	2.6

[1]Refrigerant charge sufficient for 15 ft. length of refrigerant lines. For longer line set requirements see the installation instructions for information about set length and additional refrigerant charge required.
[2]HACR type circuit breaker of fuse.
[3]Refer to National Electrical Code manual to determine wire, fuse and disconnect size requirements.

Accessories

MODEL NO.		WLA16AY24	WLA16AY36	WLA16AY48	WLA16AY60
Compressor crankcase heater (with temperature thermostat)		44-101884-08	44-101884-08	44-103663-16	Factory Standard
Compressor crankcase heater (without temperature thermostat)		44-17402-44	44-17402-44	44-17402-45	44-17402-45
Low ambient control		RXAD-A08	RXAD-A08	RXAD-A08	RXAD-A08
Compressor sound cover		68-23427-26	68-23427-26	68-23427-25	68-23427-25
Low pressure control		Factory Standard	Factory Standard	Factory Standard	Factory Standard
High pressure control		Factory Standard	Factory Standard	Factory Standard	Factory Standard
Compressor hard start kit		SK-A1	SK-A1	SK-A1	SK-A1
Compressor time delay		RXMD-B01	RXMD-B01	RXMD-B01	RXMD-B01
Liquid Line Solenoid (24 VAC, 50/60 Hz)	Solenoid Valve	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC
	Solenoid Coil	61-AMG24V	61-AMG24V	61-AMG24V	61-AMG24V
Liquid Line Solenoid (120/240 VAC, 50/60 Hz)	Solenoid Valve	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC	200RD2T3TVLC
	Solenoid Coil	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V	61-AMG120/240V

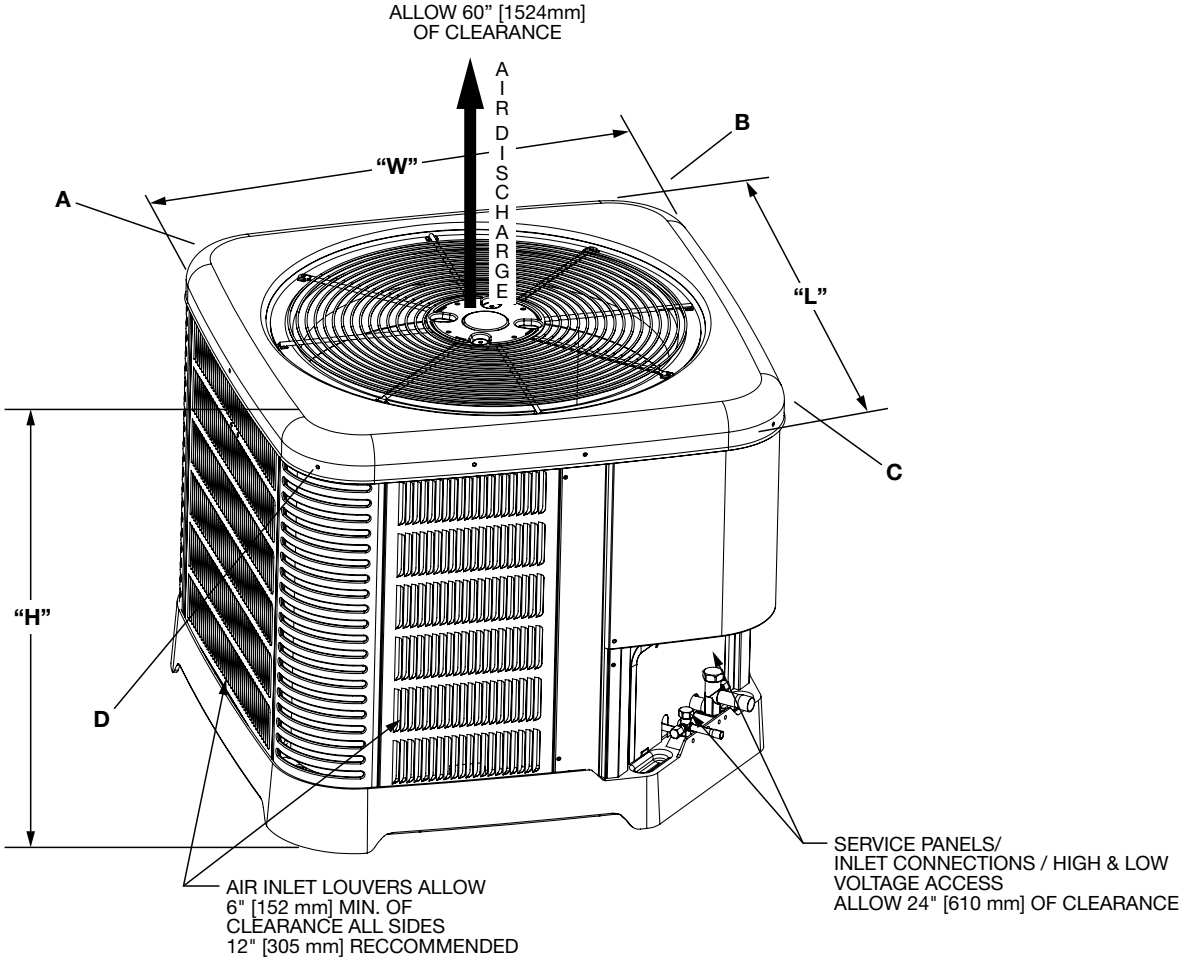
Weighted Sound Power Level (dBA)

UNIT SIZE - VOLTAGE, SERIES	STANDARD RATING (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA WITHOUT TONE ADJUSTMENT)						
		125	250	500	1000	2000	4000	8000
WLA16AY24	74.1	69.8	69.6	65.6	66.9	60.2	54.3	49.8
WLA16AY36	71.9	68.6	64.1	62.7	62.5	57.0	59.9	54.8
WLA16AY48	73.2	65.3	64.3	65.7	59.3	59.3	59.9	57.7
WLA16AY60	74.0	68.5	70.4	67.0	65.2	59.3	56.2	49.3

NOTE: Tested in accordance with AHRI Standard 270-08 (not listed in AHRI)

Unit Dimensions

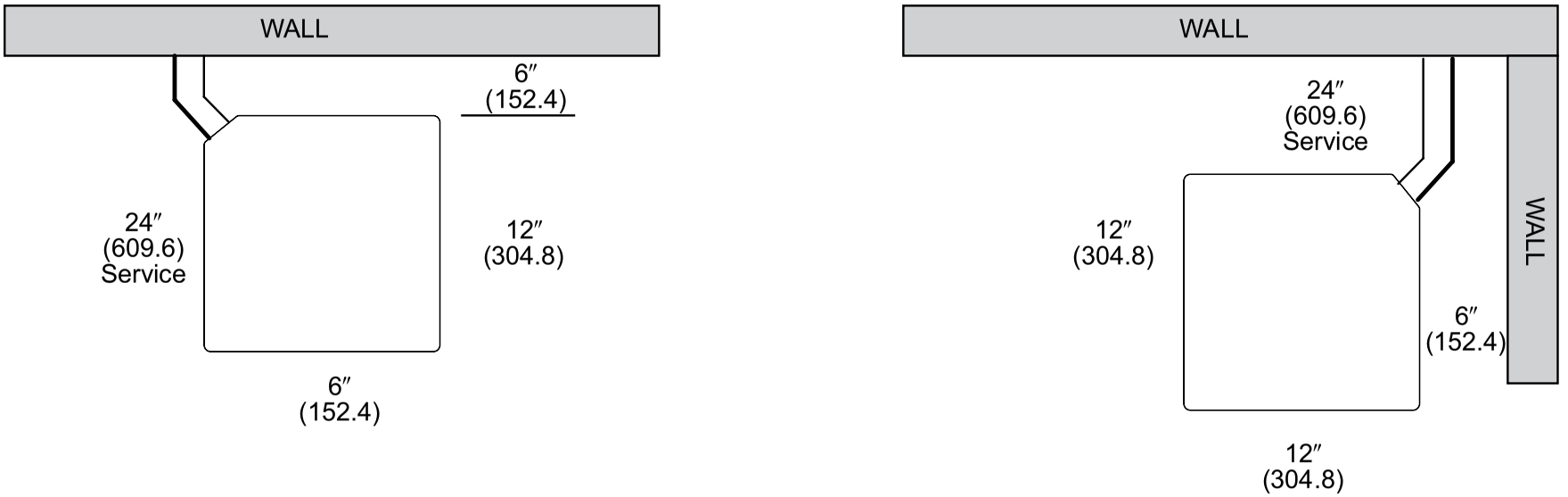
MODEL NO.	OPERATING						SHIPPING					
	H (Height)		L (Length)		W (Width)		H (Height)		L (Length)		W (Width)	
	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm	INCHES	mm
WLA16AY24	25.00	635	33.75	857	33.75	857	26.50	673	36.38	924	36.38	924
WLA16AY36	31.00	787	33.75	857	33.75	857	32.50	826	36.38	924	36.38	924
WLA16AY48	35.00	889	33.75	857	33.75	857	36.50	927	36.38	924	36.38	924
WLA16AY60	45.00	1143	35.75	908	35.75	908	46.50	1181	38.38	975	38.38	975

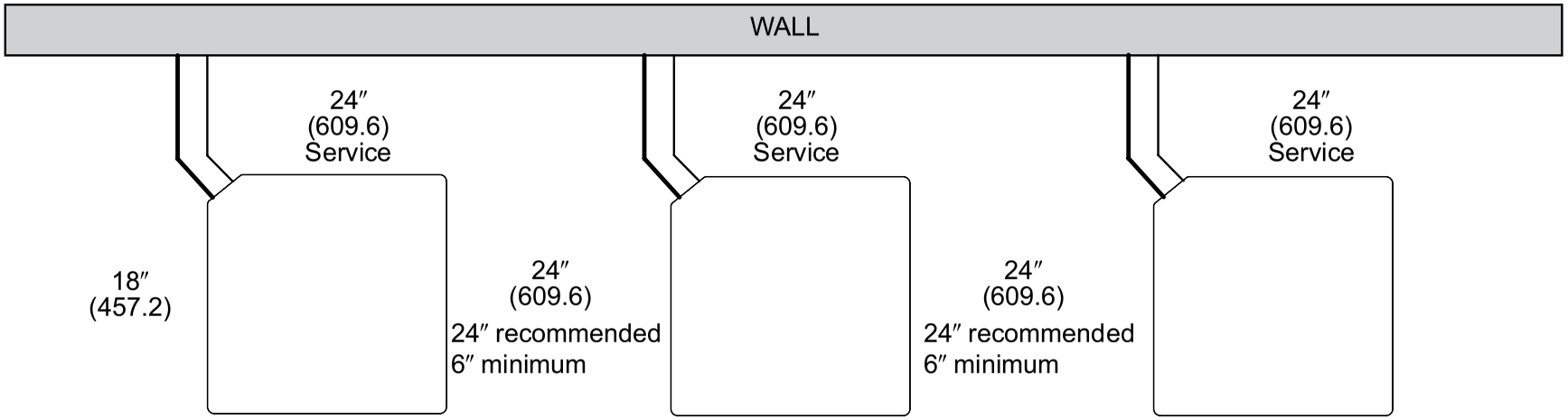


[ ] Designates Metric Conversions

ST-A1348-01-00

CLEARANCES





NOTE: NUMBERS IN () = mm

IMPORTANT: When installing multiple units in an alcove, roof well or partially enclosed area, ensure there is adequate ventillation to prevent re-circulation of discharge air.

Refrigerant Line Size Information

16 SEER2 2-STAGE AC R-454B											
UNIT SIZE	ALLOWABLE LIQUID LINE SIZE	ALLOWABLE SUCTION LINE SIZE	OUTDOOR UNIT ABOVE OR BELOW INDOOR UNIT EQUIVALENT LENGTH (FEET)									
			0-25	26-50	51-75	76-100	101-125	126-150	151-175	176-200	201-225	226-250
			MAXIMUM VERTICAL SEPARATION / CAPACITY MULTIPLIER									
2.0 Ton **SEE NOTE 3	1/4"	5/8"	25/1	50/0.99	33/0.98	3/0.98	0/0.97	0/0.96	0/0.95	0/0.95	0/0.94	0/0.94
	5/16"	5/8"	25/1	50/0.99	75/0.98	91/0.98	82/0.97	73/0.96	65/0.95	56/0.95	48/0.94	42/0.94
	3/8"	5/8"	25/1	50/0.99	75/0.98	100/0.98	110/0.97	107/0.96	104/0.95	101/0.95	98/0.94	95/0.94
	1/4"	3/4"	25/1	50/1	33/0.99	3/0.99	0/0.99	0/0.99	0/0.98	0/0.98	0/0.98	0/0.98
	5/16"	3/4"	25/1	50/1	75/0.99	91/0.99	82/0.99	73/0.99	65/0.98	56/0.98	48/0.98	42/0.98
	3/8"	3/4"	25/1	50/1	75/0.99	100/0.99	110/0.99	107/0.99	104/0.98	101/0.98	98/0.98	95/0.98
3 Ton	5/16"	5/8"	25/1	50/0.98	71/0.97	53/0.95	35/0.93	17/0.92	0/0.9	0/0.89	0/0.87	0/0.87
	3/8"	5/8"	25/1	50/0.98	75/0.97	100/0.95	94/0.93	87/0.92	81/0.9	75/0.89	68/0.87	62/0.87
	5/16"	3/4"	25/1	50/0.99	71/0.99	53/0.98	35/0.98	17/0.97	0/0.96	0/0.96	0/0.95	0/0.95
	3/8"	3/4"	25/1	50/0.99	75/0.99	100/0.98	94/0.98	87/0.97	81/0.96	75/0.96	68/0.95	62/0.95
	1/2"	3/4"	25/1	50/0.99	75/0.99	100/0.98	119/0.98	118/0.97	116/0.96	115/0.96	114/0.95	113/0.95
	3/8"	7/8"	25/1	50/1	75/0.99	100/0.99	94/0.99	87/0.99	81/0.98	75/0.98	68/0.98	62/0.98
	1/2"	7/8"	25/1	50/1	75/0.99	100/0.99	119/0.99	118/0.99	116/0.98	115/0.98	114/0.98	113/0.98
4 Ton	3/8"	3/4"	25/1	50/0.99	75/0.98	83/0.97	72/0.96	61/0.95	51/0.94	40/0.93	29/0.92	19/0.91
	1/2"	3/4"	25/1	50/0.99	75/0.98	100/0.97	114/0.96	112/0.95	110/0.94	108/0.93	106/0.92	105/0.91
	3/8"	7/8"	25/1	50/1	75/0.99	83/0.99	72/0.98	61/0.98	51/0.97	40/0.97	29/0.96	19/0.96
	1/2"	7/8"	25/1	50/1	75/0.99	100/0.99	114/0.98	112/0.98	110/0.97	108/0.97	106/0.96	105/0.96
5 Ton	3/8"	3/4"	25/1	50/0.98	75/0.97	61/0.95	45/0.94	29/0.92	13/0.9	0/0.89	0/0.87	0/0.86
	1/2"	3/4"	25/1	50/0.98	75/0.97	100/0.95	109/0.94	106/0.92	102/0.9	99/0.89	96/0.87	94/0.86
	3/8"	7/8"	25/1	50/0.99	75/0.99	61/0.98	45/0.97	29/0.97	13/0.96	0/0.95	0/0.95	0/0.94
	1/2"	7/8"	25/1	50/0.99	75/0.99	100/0.98	109/0.97	106/0.97	102/0.96	99/0.95	96/0.95	94/0.94

NOTES:

1) Maximum Equivalent Line Length may not exceed 250'.
2) Maximum Actual Line Length may not exceed 200'.
3) Light Grey shaded areas are considered long line and may require accessories as recommended in Long Line Set Guide.
4) **DO NOT** use suction line traps in the suction riser as this adds additional unwanted pressure drop in the system.

Refrigerant Line Size Information (Con't.)

16 SEER2 2-STAGE AC R-454B											
UNIT SIZE	ALLOWABLE LIQUID LINE SIZE	ALLOWABLE SUCTION LINE SIZE	OUTDOOR UNIT ABOVE OR BELOW INDOOR UNIT EQUIVALENT LENGTH (METERS)									
			0-8	8-15	16-23	23-30	31-38	38-46	46-53	54-61	61-69	69-76
			MAXIMUM VERTICAL SEPARATION / CAPACITY MULTIPLIER									
2.0 Ton **SEE NOTE 3	1/4"	5/8"	8/1	15/0.99	10/0.98	1/0.98	0/0.97	0/0.96	0/0.95	0/0.95	0/0.94	0/0.94
	5/16"	5/8"	8/1	15/0.99	23/0.98	28/0.98	25/0.97	22/0.96	20/0.95	17/0.95	15/0.94	13/0.94
	3/8"	5/8"	8/1	15/0.99	23/0.98	30/0.98	34/0.97	33/0.96	32/0.95	31/0.95	30/0.94	29/0.94
	1/4"	3/4"	8/1	15/1	10/0.99	1/0.99	0/0.99	0/0.99	0/0.98	0/0.98	0/0.98	0/0.98
	5/16"	3/4"	8/1	15/1	23/0.99	28/0.99	25/0.99	22/0.99	20/0.98	17/0.98	15/0.98	13/0.98
	3/8"	3/4"	8/1	15/1	23/0.99	30/0.99	34/0.99	33/0.99	32/0.98	31/0.98	30/0.98	29/0.98
3 Ton	5/16"	5/8"	8/1	15/0.98	22/0.97	16/0.95	11/0.93	5/0.92	0/0.9	0/0.89	0/0.87	0/0.87
	3/8"	5/8"	8/1	15/0.98	23/0.97	30/0.95	29/0.93	27/0.92	25/0.9	23/0.89	21/0.87	19/0.87
	5/16"	3/4"	8/1	15/0.98	22/0.99	16/0.98	11/0.98	5/0.97	0/0.96	0/0.96	0/0.95	0/0.95
	3/8"	3/4"	8/1	15/0.98	23/0.99	30/0.98	29/0.98	27/0.97	25/0.96	23/0.96	21/0.95	19/0.95
	1/2"	3/4"	8/1	15/0.98	23/0.99	30/0.98	36/0.98	36/0.97	35/0.96	35/0.96	35/0.95	34/0.95
	3/8"	7/8"	8/1	15/1	23/0.99	30/0.99	29/0.99	27/0.99	25/0.98	23/0.98	21/0.98	19/0.98
	1/2"	7/8"	8/1	15/1	23/0.99	30/0.99	36/0.99	36/0.99	35/0.98	35/0.98	35/0.98	34/0.98
4 Ton	3/8"	3/4"	8/1	15/0.99	23/0.98	25/0.97	22/0.96	19/0.95	16/0.94	12/0.93	9/0.92	6/0.91
	1/2"	3/4"	8/1	15/0.99	23/0.98	30/0.97	35/0.96	34/0.95	34/0.94	33/0.93	32/0.92	32/0.91
	3/8"	7/8"	8/1	15/1	23/0.99	25/0.99	22/0.98	19/0.98	16/0.97	12/0.97	9/0.96	6/0.96
	1/2"	7/8"	8/1	15/1	23/0.99	30/0.99	35/0.98	34/0.98	34/0.97	33/0.97	32/0.96	32/0.96
5 Ton	3/8"	3/4"	8/1	15/0.98	23/0.97	19/0.95	14/0.94	9/0.92	4/0.9	0/0.89	0/0.87	0/0.86
	1/2"	3/4"	8/1	15/0.98	23/0.97	30/0.95	33/0.94	32/0.92	31/0.9	30/0.89	29/0.87	29/0.86
	3/8"	7/8"	8/1	15/0.99	23/0.99	19/0.98	14/0.97	9/0.97	4/0.96	0/0.95	0/0.95	0/0.94
	1/2"	7/8"	8/1	15/0.99	23/0.99	30/0.98	33/0.97	32/0.97	31/0.96	30/0.95	29/0.95	29/0.94

NOTES:

1) Maximum Equivalent Line Length may not exceed 76 meters.
2) Maximum Actual Line Length may not exceed 61 meters.
3) Light Grey shaded areas are considered long line and may require accessories as recommended in Long Line Set Guide.
4) **DO NOT** use suction line traps in the suction riser as this adds additional unwanted pressure drop in the system.

ADDITIONAL OIL, OZ.											
LINESET LENGTH	50	60	70	80	90	100	110	120	130	140	150
2T	N/A	N/A	N/A	N/A	N/A	1	2	3	5	6	7
3T	N/A	N/A	N/A	N/A	N/A	N/A	1	2	3	5	6
4T	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
5T	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Performance Data @ AHRI Standard Conditions – Cooling

DESIGNATED TESTED COMBINATION (DTC)							
OUTDOOR UNIT	**INDOOR COIL**	**TOTAL CAPACITY BTU/H [KW]**	**NET SENSIBLE BTU/H [KW]**	**NET LATENT BTU/H [KW]**	**SEER2**	**EER2**	**INDOOR CFM [L/S]**
WLA16AY24	TCFY2417STAN	22,800 [6.7]	16,200 [4.7]	6,600 [1.9]	14.3	11.7	750 [354.0]
WLA16AY36	TCFY3617STAN	34,200 [10.0]	24,300 [7.1]	9,900 [2.9]	14.3	11.7	1,075 [507.3]
WLA16AY48	TCFY4821STAN	45,500 [13.3]	32,300 [9.5]	13,200 [3.9]	13.8	11.2	1,450 [684.3]
WLA16AY60	TCFY6024STAN	56,000 [16.4]	39,600 [11.6]	16,400 [4.8]	13.8	11.2	1,600 [755.1]

NOTE: This data includes DTC (Designated Test Combination) ratings and is for reference purposes only. A full listing of official ratings and system match-ups, along with downloadable certificates, can be accessed from the AHRI website: www.ahridirectory.org.

[ ] Designates Metric Conversions

GENERAL TERMS OF LIMITED WARRANTY*

Manufacturer will furnish a replacement for any part of this product which fails in normal use and service within the applicable period stated, in accordance with the terms of the limited warranty.

***For complete details of the Limited and Conditional Warranties, including applicable terms and conditions, contact your local contractor or the Manufacturer for a copy of the product warranty certificate.**

Conditional Parts
(Registration Required)..... Ten (10) Years

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.

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