

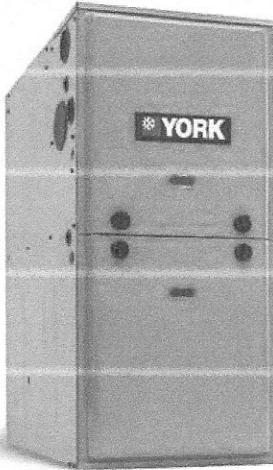
TECHNICAL GUIDE

95.0% AFUE STANDARD PSC SINGLE STAGE MULTI-POSITION RESIDENTIAL GAS FURNACES

MODELS: TG9S

NATURAL GAS

40 - 130 MBH INPUT



Due to continuous product improvement, specifications are subject to change without notice.

Visit us on the web at

www.upgnet.com and www.york.com

Additional rating information can be found at

www.ahridirectory.org

WARRANTY SUMMARY

A 20-year limited warranty on heat exchangers in residential applications.

A 10-year warranty on the heat exchanger in commercial applications.

Standard 5-year limited Parts warranty.

Extended lifetime heat exchanger and 10-year limited parts warranty when product is registered online within 90 days of purchase for replacement or closing for new home construction.

See Limited Warranty certificate in Users Information Manual for details.

DESCRIPTION

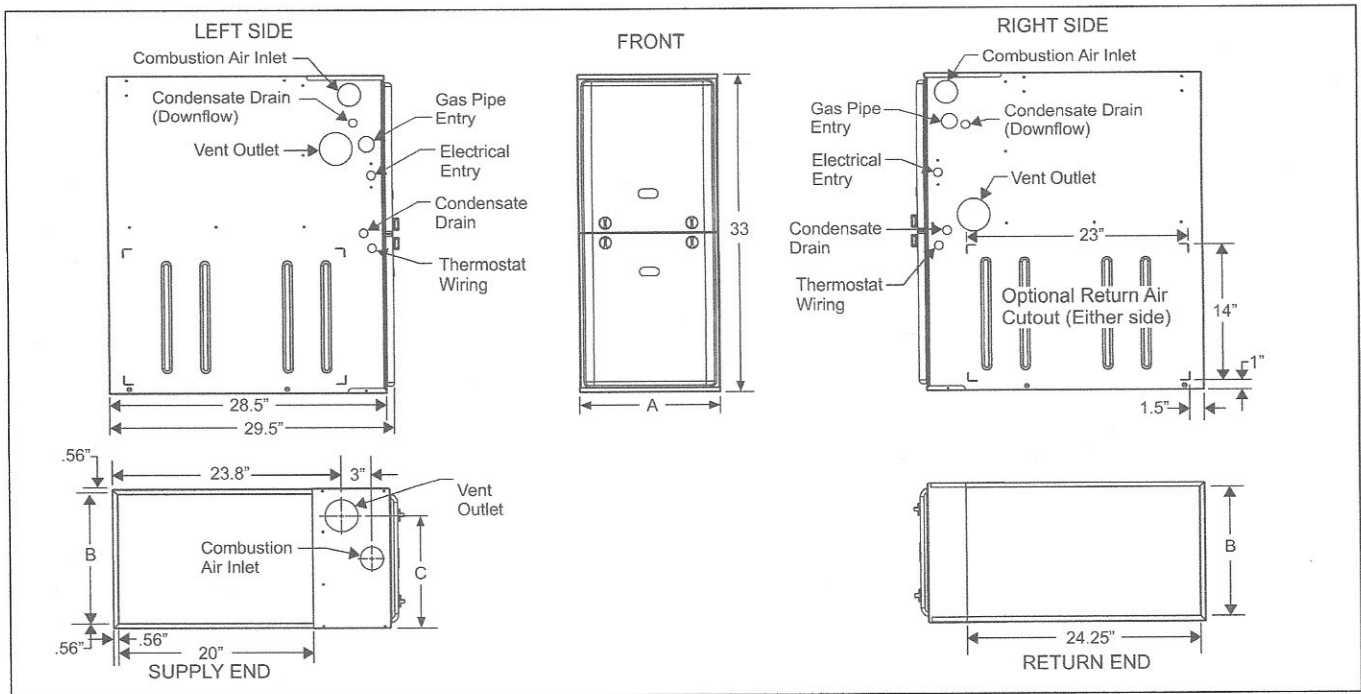
These compact units employ induced combustion, reliable hot surface ignition and high heat transfer aluminized tubular heat exchangers. The units are factory shipped for installation in upflow or horizontal applications and may be converted for downflow applications.

These furnaces are designed for residential installation in a basement, closet, alcove, attic, recreation room or garage and are also ideal for commercial applications. All units are factory assembled, wired and tested to assure safe dependable and economical installation and operation.

These units are Category IV, National Fuel Gas Code and may be vented either through side wall or roof applications using approved plastic combustion air and vent piping. Approved plastic combustion air and vent piping include Selkirk Polyflue, Duravent Polypro, & Centrotherm Innoflue polypropylene venting systems.

FEATURES

- Easily applied in upflow, horizontal left or right, or downflow installation with minimal conversion necessary.
- Compact, easy to install, ideal height 33" tall cabinet.
- Blower-off delay for cooling SEER improvement.
- Easy access to controls to connect power/control wiring.
- Built-in, high level self diagnostics with fault code displays standard on integrated control module for reliable operation.
- Low unit amp requirement for easy replacement application.
- Single wire twinning or staging feature available.
- All models are convertible to use propane (LP) gas.
- Electronic Hot Surface Ignition saves fuel cost with increased dependability and reliability.
- 100% shut off main gas valve for extra safety.
- 4 speed, direct drive PSC motor.
- 24V, 40 VA control transformer and blower relay supplied for add-on cooling.
- Hi-tech tubular aluminized steel primary heat exchanger.
- Secondary heat exchanger made of corrosion resistant stainless steel materials.
- Timed on, adjustable off blower capability for maximum comfort.
- Blower door safety switch.
- Solid removable bottom panel allows easy conversion.
- Airflow leakage less than 1% of nominal airflow at duct performance testing conditions.
- No knockouts to deal with, making installation easier.
- Movable duct connector flanges for application flexibility.
- Quiet inducer operation.
- Inducer rotates for easy conversion of venting options.
- Fully supported blower assembly for easy access and removal of blower.
- External air filters used for maximum flexibility in meeting customers IAQ needs.
- Protection included from air intake, exhaust vent, or condensate blockage.
- No special vent termination required.
- 1/4 turn knobs provided for easy door removal.
- Internal condensate trap design (patent pending) provides condensate management options and is self-priming to prevent nuisance problems.
- Venting applications - may be installed as either 2-pipe (sealed combustion) or single-pipe vent (using indoor combustion air).



Cabinet & Duct Dimensions

F-3
F-2
F-1

Models	Nominal CFM (m ³ /min)	Cabinet Size	Cabinet Dimensions (Inches)			Approximate Operating Weights
			A	B	C	Lbs
TG9S040A08MP11	800	A	14 1/2	13 3/8	11 3/4	113
TG9S060A10MP11	1000	A	14 1/2	13 3/8	11 3/4	118
TG9S060B12MP11	1200	B	17 1/2	16 3/8	13 1/4	122
TG9S080B12MP11	1200	B	17 1/2	16 3/8	14 3/4	126
TG9S080C16MP11	1600	C	21	19 7/8	16 1/2	136
TG9S080C22MP11	2200	C	21	19 7/8	16 1/2	139
TG9S100C16MP11	1600	C	21	19 7/8	18 1/4	142
TG9S100C20MP11	2000	C	21	19 7/8	18 1/4	145
TG9S120D16MP11	1600	D	24 1/2	23 3/8	21 3/4	153
TG9S120D20MP11	2000	D	24 1/2	23 3/8	21 3/4	156
TG9S130D20MP11	2000	D	24 1/2	23 3/8	No Hole	160

Ratings & Physical / Electrical Data

Models	Input		Output	AFUE %	Air Temp. Rise	Max. Outlet Air Temp	Blower		Blower Size	Max Over-Current Protect	Total Unit Amps	Min. wire Size (awg) @ 75 ft one way
	MBH	MBH			°F	°F	HP	Amps				
TG9S040A08MP11	40	38	95.5	30-60	190	1/3	4.8	11x8	15	8.0	14	
TG9S060A10MP11	60	57	95.5	30-60	190	1/2	7.1	11x8	15	10.0	14	
TG9S060B12MP11	60	57	95.5	30-60	190	1/2	7.1	11x8	15	10.0	14	
TG9S080B12MP11	80	76	95.5	35-65	190	1/2	7.1	11x8	15	10.0	14	
TG9S080C16MP11	80	76	95.5	35-65	190	3/4	8.8	11x10	15	11.5	14	
TG9S080C22MP11	80	76	95.5	35-65	190	1	14.5	11x11	20	17.0	12	
TG9S100C16MP11	100	95	95.5	35-65	190	3/4	8.8	11x10	15	11.5	14	
TG9S100C20MP11	100	95	95.5	35-65	190	1	14.5	11x11	20	17.0	12	
TG9S120D16MP11	120	114	95.5	40-70	190	3/4	8.8	11x10	15	11.5	14	
TG9S120D20MP11	120	114	95.5	35-65	190	1	14.5	11x11	20	17.0	12	
TG9S130D20MP11	130	123.5	95.5	45-75	190	1	14.5	11x11	20	17.0	12	

Annual Fuel Utilization Efficiency (AFUE) numbers are determined in accordance with DOE Test procedures.

Wire size and over current protection must comply with the National Electrical Code (NFPA-70-latest edition) and all local codes.

The furnace shall be installed so that the electrical components are protected from water.

FILTER PERFORMANCE

The airflow capacity data published in the "Blower Performance" tables shown represents blower performance WITH-OUT filters.

All applications of these furnaces require the use of field installed air filters. All filter media and mounting hardware or provisions must be field installed external to the furnace cabinet. DO NOT attempt to install any filters inside the furnace.

NOTICE

Single side return above 1800 CFM is approved as long as the filter velocity does not exceed filter manufacturer's recommendation and a transition is used to allow use on a 20x25 filter.

Recommended Filter Sizes (High velocity 600 FPM)

CFM	Cabinet Size	Side inches	Bottom inches
800	A	16 x 25	14 x 25
1000	A	16 x 25	14 x 25
1200	A	16 x 25	14 x 25
1200	B	16 x 25	16 x 25
1600	B	16 x 25	16 x 25
1600	C	16 x 25	20 x 25
2000	C	(2) 16 x 25	20 x 25

Recommended Filter Sizes (High velocity 600 FPM)

2200	C	(2) 16 x 25	20 x 25
2000	D	(2) 16 x 25	22 x 25

- Air velocity through throwaway type filters may not exceed 300 feet per minute (91.4 m/min). All velocities over this require the use of high velocity filters.
- Do not exceed 1800 CFM using a single side return and a 16x25 filter. For CFM greater than 1800, you may use two side returns or one side and the bottom or one return with a transition to allow use of a 20x25 filter.

Unit Clearances to Combustibles

Application	Upflow	Downflow	Horizontal
Top	1"	0"	0"
Vent	0"	0"	0"
Rear	0"	0"	0"
Side	0"	0"	1"
Front*	0"	0"	0"
Floor	Combustible	Combustible ¹	Combustible
Closet	Yes	Yes	Yes
Line Contact	No	No	Yes

1. For combustible floors only when used with special sub-base.

* - 24" clearance in front and 18" on side recommended for service access.

All furnaces approved for alcove and attic installation.



TECHNICAL GUIDE

**LX SERIES
SPLIT SYSTEM
AIR CONDITIONERS**
14 SEER – R-410A – 1 PHASE
1.5 THRU 5 NOMINAL TONS
MODELS: YCE18 THRU 60

FOR INSTALLATION ONLY IN US SOUTHEAST
AND NORTHERN REGIONS AND CANADA



ISO 9001
Certified Quality
Management System



Due to continuous product improvement, specifications are subject to change without notice.

Visit us on the web at

www.upgnet.com and www.york.com

Additional rating information can be found at
www.ahridirectory.org

WARRANTY SUMMARY*

Standard 5-Years limited parts warranty.

Standard 10-Years limited compressor warranty.

Extended 10-Years limited parts warranty when product is registered online within 90 days of purchase for replacement or closing for new home construction.

*Does not apply to R-22 models, 3-Phase models, or Internet sales.

See Limited Warranty certificate in User's Information Manual for details.

DESCRIPTION

The YCE models are the newest addition to our successful LX Series split system air conditioner lineup. Optimized for the new 14 SEER Regional Minimum Efficiency in the Southeast US, these outdoor units are specifically designed to be matched with York indoor coils, furnaces, and air handlers to provide a complete system solution.

FEATURES

- **Small Footprint** - Minimum footprint for easier handling, transportation, and installation.
- **Easier Installation** - Independent panels provide quick access for unit setup. Installation time is reduced by easy power and control wiring access. Select indoor matches with factory-mounted TXVs are available for quicker system installation. The factory installed filter-drier and factory charge for a 15-Ft lineset means less time spent brazing and charging the system. The small base dimension and reduced unit clearances make for easier retrofits.
- **Accessible Information** - QR code on unit provides quick access to technical documents and warranty information.
- **Durable Finish** - The coated steel wire fan guard, coated external fasteners, and pre-treated G90-equivalent galvanized steel chassis components resist corrosion and rust creep. Champagne colored powdercoat paint further protects external panels.
- **Quality Coils** - The high efficiency microchannel aluminum coil is manufactured using an improved material system providing reliable performance and small unit size.
- **Rugged Coil Protection** - Coils are protected from mechanical damage by a proven stamped steel coil guard design.
- **Protected Compressor** - Compressors are protected internally by a high pressure relief valve and a temperature sensor, and externally by the system high pressure switch. The liquid line filter-drier is factory installed to protect the compressor against moisture and debris.
- **Reliable Operation** - Ball bearing fan motors provide superior performance in extreme temperatures.
- **Environmentally Friendly** - CFC-free R-410A refrigerant delivers environmentally friendly performance with zero ozone depletion.
- **Top Discharge** - Warm air is blown up, away from the structure and any landscaping and allows compact location on multi-unit applications.
- **Low Operating Sound Levels** - Developed using CFD and FEA tools, the sturdy cabinet and top design provides sound performance of 76 dBA or lower. Compatible accessories for further sound reduction are also available.
- **Better Service Access** - Diagonal base valves with open access for low-loss fittings, single panel access to the electrical controls, swing out control box for full corner access, and removable fan guard allow easy access for unit maintenance.
- **Agency Listed** - Safety certified by CSA to UL 1995 / CSA 22.2. Performance certified to ANSI/AHRI Standard 210/240 in accordance with the Unitary Small Equipment certification program.

FOR DISTRIBUTION USE ONLY - NOT TO BE USED AT POINT OF RETAIL SALE

LIST OF SECTIONS

DESCRIPTION 1
 FEATURES 1
 NOMENCLATURE 2
 PHYSICAL AND ELECTRICAL DATA 3
 DIMENSIONS 3
 SYSTEM CHARGE FOR VARIOUS MATCHED SYSTEMS 4
 COOLING CAPACITY - With Air Handler Coils 5
 COOLING CAPACITY - Upflow, Downflow &
 Horizontal Furnaces and Coils (Coil Only Ratings) 9
 COOLING CAPACITY - With High Efficiency Motor Furnaces . . 11
 ACCESSORIES 41
 SOUND POWER RATINGS 41
 MECHANICAL SPECIFICATIONS 42
 TYPICAL INSTALLATION 43
 TYPICAL FIELD WIRING 44
 ALTERNATIVE INSTALLATION CLEARANCES 44
 PERFORMANCE DATA - 1.5 TON 45
 PERFORMANCE DATA - 2 TON 48
 PERFORMANCE DATA - 2.5 TON 52
 PERFORMANCE DATA - 3 TON 56
 PERFORMANCE DATA - 3.5 TON 60
 PERFORMANCE DATA - 4 TON 65
 PERFORMANCE DATA - 5 TON 69

NOMENCLATURE

BRAND	Y	Y = York
PRODUCT TYPE	C	C = Air Conditioner H = Heat Pump F = Fin & Tube Air Conditioner
NOMINAL SERIES EFFICIENCY AND STAGING	E	D = 13 SEER / 1-Stage (US Northern Region) E = 14 SEER / 1-Stage (US Southeast Region) S = 14 SEER / 1-Stage (US Southwest Region)
NOMINAL UNIT CAPACITY (MBH)	36	18 = 1.5 Ton 42 = 3.5 Ton 24 = 2 Ton 48 = 4 Ton 30 = 2.5 Ton 60 = 5 Ton 36 = 3 Ton
REFRIGERANT	B	B = R-410A
VOLTAGE (Voltage-Phase-Hertz)	2	2 = 208/230-1-60
GENERATION (MAJOR REVISION)	1	1 = 1st Gen 2 = 2nd Gen etc
FACTORY OPTION	S	S = Standard (No Options) H = Hard Start Kit
STYLE LETTER (MINOR REVISION) NOT USED FOR ORDERING	A	A = Style A B = Style B etc

PHYSICAL AND ELECTRICAL DATA

Cu-3

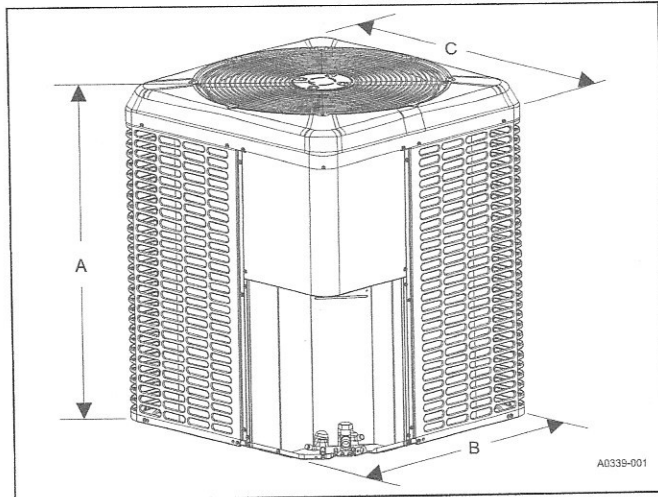
Cu-2

Cu-1

MODEL	YCE18B21H	YCE24B21H	YCE30B21H	YCE36B21H	YCE42B21H	YCE48B21S	YCE60B21S
Unit Supply Voltage	208-230V, 1 ϕ , 60Hz						
Normal Voltage Range ¹	187 to 252						
Minimum Circuit Ampacity	10.2	11.6	14.2	18.9	21.5	25.7	31.7
Max. Overcurrent Device Amps ²	15	20	20	30	35	45	50
Min. Overcurrent Device Amps ³	15	15	15	20	25	30	35
Compressor Type	Recip	Recip	Recip	Recip	Recip	Scroll	Scroll
Compressor Amps	Rated Load	7.7	8.6	10.7	14.1	16.2	24.3
	Locked Rotor	45.0	45.0	57.0	78.0	88.0	144.2
Crankcase Heater	No	No	No	No	No	No	No
Factory External Discharge Muffler	No	No	No	No	Yes	No	No
HS Kit Required with TXV ⁴	Yes*	Yes*	Yes*	Yes*	Yes*	No	No
Fan Diameter Inches	18	22	22	22	24	24	26
Fan Motor	Rated HP	1/12	1/8	1/8	1/4	1/4	1/4
	Rated Load Amps	0.64	0.80	0.80	1.30	1.30	1.30
	Nominal RPM	1000	1075	1075	850	850	850
	Nominal CFM	1900	2875	2950	3275	3500	3500
Coil	Face Area Sq. Ft.	12.37	13.83	13.83	17.37	18.74	23.40
	Rows Deep	1	1	1	1	1	1
	Fins / Inch	23	23	23	23	23	23
Liquid Line Set OD (Field Installed)	3/8	3/8	3/8	3/8	3/8	3/8	3/8
Vapor Line Set OD (Field Installed) ⁵	3/4	3/4	3/4	3/4	7/8	7/8	1-1/8 [‡]
Unit Charge (Lbs. - Oz.) ⁶	3 - 14	3 - 12	4 - 3	4 - 14	5 - 2	4 - 15	5 - 12
Charge Per Foot, Oz.	0.62	0.62	0.62	0.62	0.67	0.67	0.75
Operating Weight Lbs.	140	155	155	180	215	200	205

* Models with "H" on the end of the model number are shipped with a Hard Start Kit installed at the factory.

1. Rated in accordance with AHRI Standard 110-2012, utilization range "A".
2. Dual element fuses or HACR circuit breaker. Maximum allowable overcurrent protection.
3. Dual element fuses or HACR circuit breaker. Minimum recommended overcurrent protection.
4. See Hard Start Kit Accessory Installation Manual for Hard Start Kit part number for each model.
5. For applications with non-standard vapor line sizes, see the "Applications & Accessories" section of this Technical Guide.
6. The Unit Charge is correct for the outdoor unit, smallest matched indoor unit, and 15 feet of refrigerant tubing. For tubing lengths other than 15 feet, add or subtract the amount of refrigerant, using the difference in actual lineset length (not the equivalent length) multiplied by the per foot value.



DIMENSIONS

Unit Model	Dimensions (Inches)			Refrigerant Connection Service Valve Size	
	A	B	C	Liquid	Vapor
YCE18B21H	33-1/4	24	24	3/8	3/4
YCE24B21H	30	29-1/4	29-1/4		
YCE30B21H	30	29-1/4	29-1/4		
YCE36B21H	36-1/4	29-1/4	29-1/4		7/8
YCE42B21H	33-1/4	35-1/4	31-3/4		
YCE48B21S	33-1/4	35-1/4	31-3/4		
YCE60B21S	36-1/4	38	34-1/4	7/8 [‡]	

[‡] Adapter fitting must be field installed for the required 1-1/8" line set.
All dimensions are in inches and are subject to change without notice.
Overall height is from bottom of base pan to top of fan guard.
Overall length and width include screw heads.

DIMENSIONS CF

Models ¹	Dimensions ²				Refrigerant Connections ^{3,4,5}	
	Height	Width	Opening Widths		Line Size	
	A	B	C	D	Liquid	Vapor
CF18A*A1	19-1/2	14-1/2	13-1/2	13-1/2	3/8	3/4
CF18BXA1	19	17-1/2	16-1/2	16-1/2		
CF24A*A1	19-1/2	14-1/2	13-1/2	13-1/2		
CF24BXA1	19	17-1/2	16-1/2	16-1/2		
CF24CXA1	21	21	20	20		
CF30AXA1	21-5/8	14-1/2	13-1/2	13-1/2		
CF30B*A1	23	17-1/2	16-1/2	16-1/2		
CF30CXA1	21	21	20	20		
CF30DXA1	25	24-1/2	23-1/2	23-1/2		
CF36AXA1	25-1/2	14-1/2	13-1/2	13-1/2		
CF36B*A1	25-5/8	17-1/2	16-1/2	16-1/2		
CF36CXA1	23	21	20	20		
CF36DXA1	25	24-1/2	23-1/2	23-1/2		
CF42BXA1	25	17-1/2	16-1/2	16-1/2		
CF42C*A1	25	21	20	20		
CF42DXA1	25	24-1/2	23-1/2	23-1/2		
CF48C*A1	27	21	20	20		
CF48DXA1	27	24-1/2	23-1/2	23-1/2		
CF60C*A1	33	21	20	20		
CF60DXA1	32-3/4	24-1/2	23-1/2	23-1/2		
CF64DXA1	32-3/4	24-1/2	23-1/2	23-1/2		
					3/8	7/8

1. Asterisk (*) denotes coil model is available as a flex coil or with factory installed TXV.
2. All dimensions are in inches.
3. Refrigerant line sizes may require larger lines for extended line lengths. See Application Data part number 247077.
4. Adapter fitting must be field installed for other line set size.
5. See outdoor unit technical guide for proper line set size.

DIMENSIONS CM

Models ¹	Dimensions ²				Refrigerant Connections ^{3,4,5}	
	Height	Width	Opening Widths		Line Size	
	A	B	C	D	Liquid	Vapor
CM18A*A1	19-1/2	14-1/2	13-1/2	13-1/2	3/8	3/4
CM18BXA1	19	17-1/2	16-1/2	16-1/2		
CM24A*A1	19-1/2	14-1/2	13-1/2	13-1/2		
CM24B*A1	19	17-1/2	16-1/2	16-1/2		
CM24CXA1	21	21	20	20		
CM30A*A1	25-1/2	14-1/2	13-1/2	13-1/2		
CM30B*A1	23	17-1/2	16-1/2	16-1/2		
CM30CXA1	23	21	20	20		
CM30DXA1	25	24-1/2	23-1/2	23-1/2		
CM36AXA1	25-1/2	14-1/2	13-1/2	13-1/2		
CM36B*A1	25-5/8	17-1/2	16-1/2	16-1/2		
CM36C*A1	25	21	20	20		
CM36DXA1	25	24-1/2	23-1/2	23-1/2		
CM42C*A1	27	21	20	20		
CM42DXA1	27	24-1/2	23-1/2	23-1/2		
CM48C*A1	33	21	20	20		
CM48D*A1	32-3/4	24-1/2	23-1/2	23-1/2		
CM60C*A1	33	21	20	20		
CM60D*A1	32-3/4	24-1/2	23-1/2	23-1/2		
CM64DXA1	32-3/4	24-1/2	23-1/2	23-1/2		
					3/8	7/8

1. Asterisk (*) denotes coil model is available as a flex coil or with factory installed TXV.
2. All dimensions are in inches.
3. Refrigerant line sizes may require larger lines for extended line lengths. See Application Data part number 247077.
4. Adapter fitting must be field installed for other line set size.
5. See outdoor unit technical guide for proper line set size.