

YORK® Variable Refrigerant Flow System

Overview of installation procedures for indoor units



BY JOHNSON CONTROLS

Introduction

YORK variable refrigerant flow (VRF) technology provides a wide range of options to ensure occupant comfort and minimize operating costs in buildings with varied loads and occupancy rates. VRF systems provide exceptional energy efficiency and flexibility as modular systems can be customized to meet the exact requirements of each project.

This document provides an overview of procedures for installing the indoor units of YORK VRF systems. It is designed to help contractors assess the labor requirements for the indoor phase of VRF installations and aid in the preparation of accurate bids.

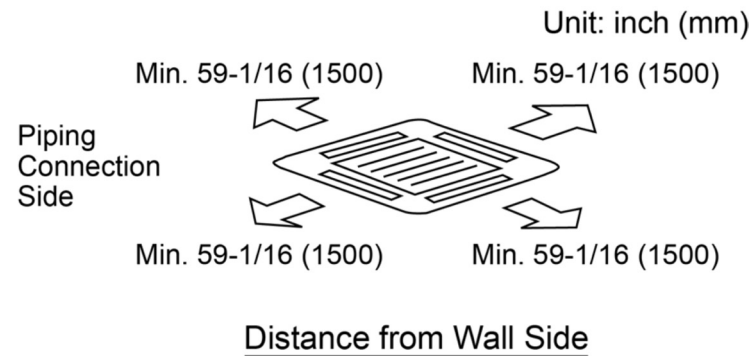
CAUTION: This is not a complete installation manual. For detailed, step-by-step installation instructions for indoor units, please consult (Insert the official name of the relevant installation manual).

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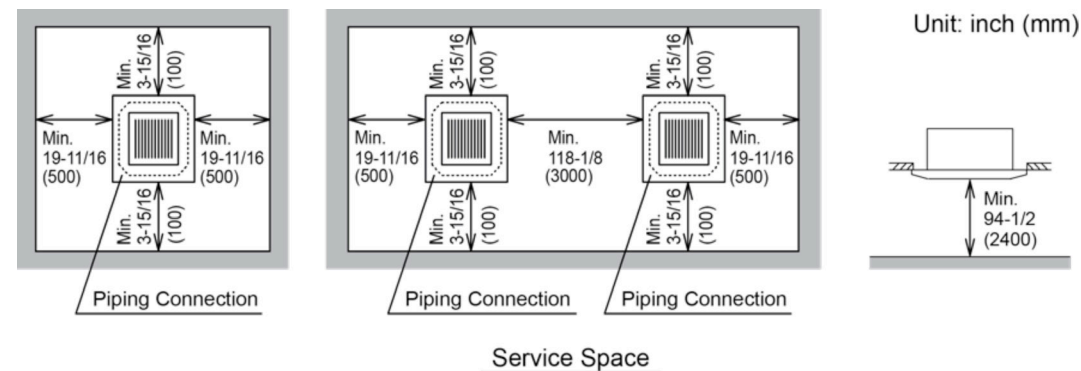
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1. Installation of 4-Way Ceiling Cassette

(1) Install the indoor unit at a proper distance from the walls as shown below.

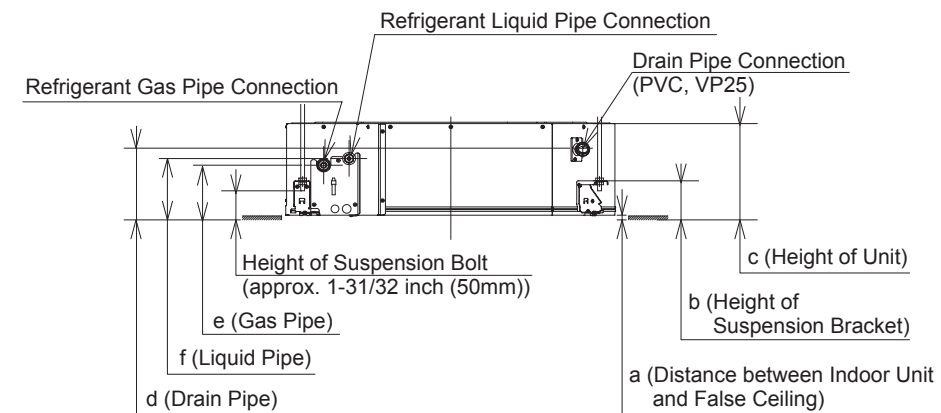


(2) Install the indoor unit with sufficient space around it to provide working space for operation and maintenance, as shown below. **WARNING: Do not place flammable materials in the service space for the indoor unit.**



(Installation of 4-Way Ceiling Cassette - continued)

(3) Connect the liquid, gas and drain piping as shown below.



Model	Mounting Position		Dimensions			
			inch (mm)			
TIC4012B21S TIC4015B21S TIC4018B21S	$15\frac{32}{32}$	$3\frac{15}{16} + \frac{3}{16}$ 0	9-3/4 (248)	7-1/4 (184)	5-1/2 (140)	6-3/16 (157)
TIC4024B21S TIC4030B21S TIC4036B21S	$(12 + \frac{5}{0})$	$(100 + \frac{5}{0})$	11- 23/32 (298)			

* indicates the dimension between lower face of indoor unit and surface of ceiling.

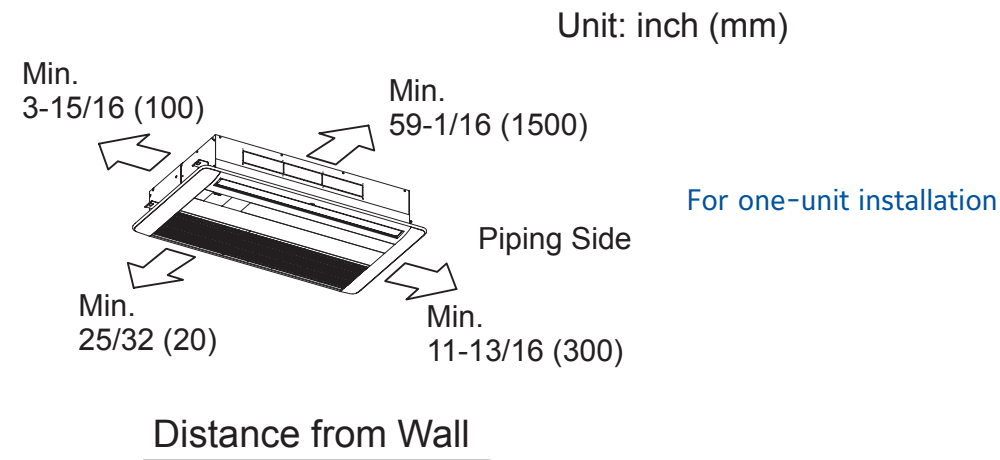
Other considerations:

1. Consider the air distribution from the indoor unit to the room, and select a suitable location so that uniform room temperature can be achieved and maintained.
2. Do not install the unit where the airflow will blow directly on the thermostat, as this may result in an inaccurate room temperature measurement, causing the room to be uncomfortable.

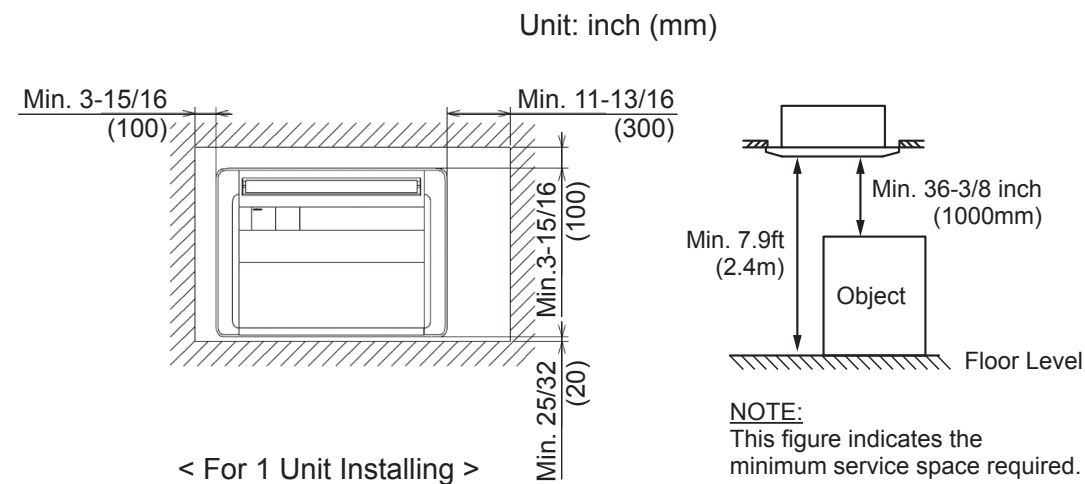
****Always consult the full installation manual for complete information on how to install each VRF system component.

2. Installation of 1-Way Ceiling Cassette

(1) Install the indoor unit at a proper distance from the walls as shown below.

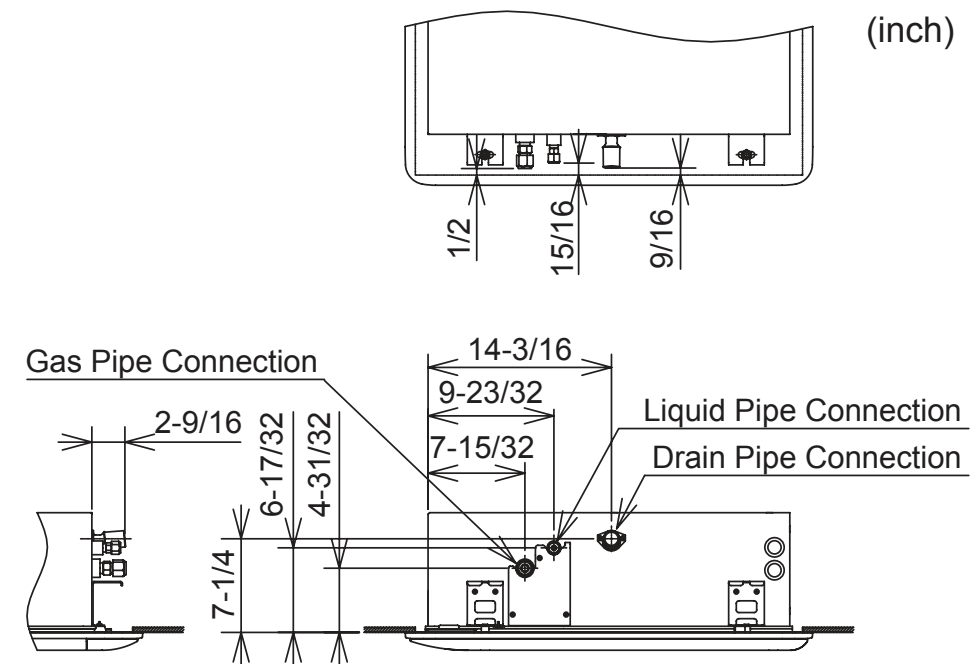


(2) Install the indoor unit with sufficient space around it to provide working space for operation and maintenance, as shown below. **WARNING:** Do not place flammable materials in the service space for the indoor unit.



(Installation of 1-Way Ceiling Cassette – continued)

(3) Connect the liquid, gas and drain piping as shown below.

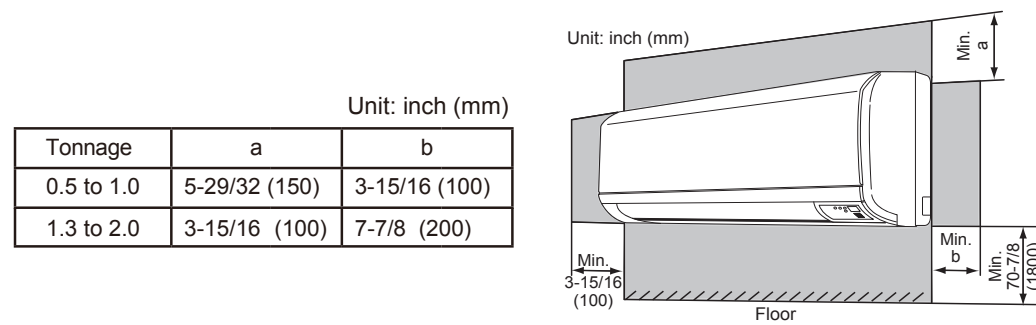


Other considerations:

1. Consider the air distribution from the indoor unit to the room, and select a suitable location so that uniform room temperature can be achieved and maintained.
 2. Do not install the unit where the airflow will blow directly on the thermostat, as this may result in an inaccurate room temperature measurement, causing the room to be uncomfortable.
- ****Always consult the full installation manual for complete information on how to install each VRF system component.

3. Installation of Wall Mount

(1) Install the indoor unit with sufficient clearance around it to provide working space for operation and maintenance and to ensure safety, as below.



(2) Install the indoor unit as high as possible. If it is installed at a lower position, air will tend to stagnate at floor level during the cooling operation. In addition, air may blow directly onto an occupant and cause discomfort.



(3) When installing a Wall Mount unit's mounting plate, make sure that the side with the drain connection is slightly (3/32 to 1/8 inch (2 to 3 mm)) lower than the other side, in order for the condensate to drain properly.

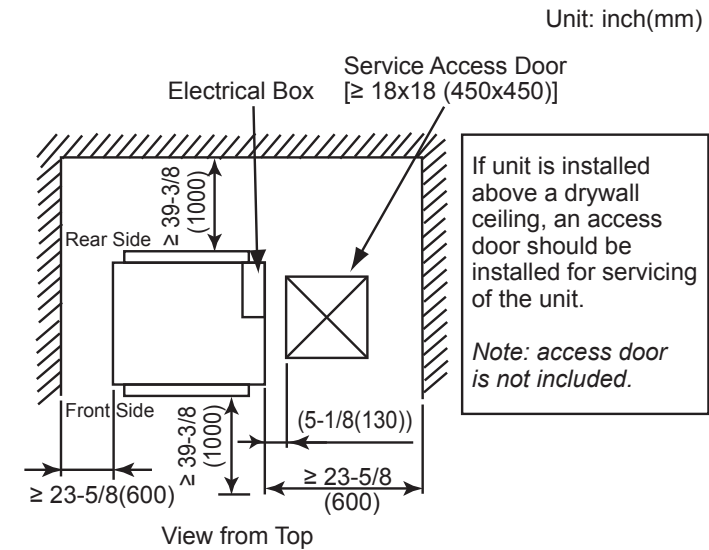
Other considerations:

1. Consider the air distribution from the indoor unit to the room, and select a suitable location so that uniform room temperature can be achieved and maintained.
2. Do not install the unit where the airflow will blow directly on the thermostat, as this may result in an inaccurate room temperature measurement, causing the room to be uncomfortable.

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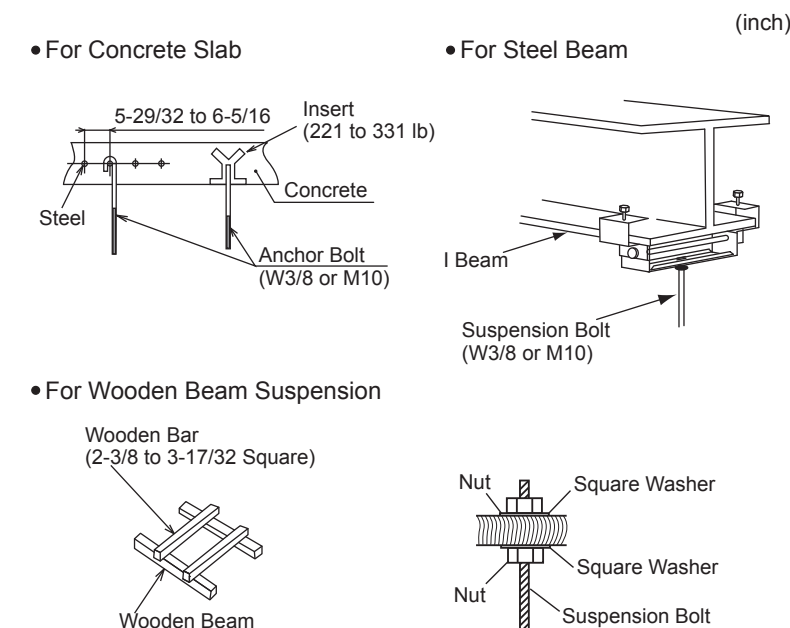
4. Installation of Ducted Slim

(1) Install the indoor unit with sufficient clearance around it to provide working space for operation, maintenance and removal/replacement, as shown below.



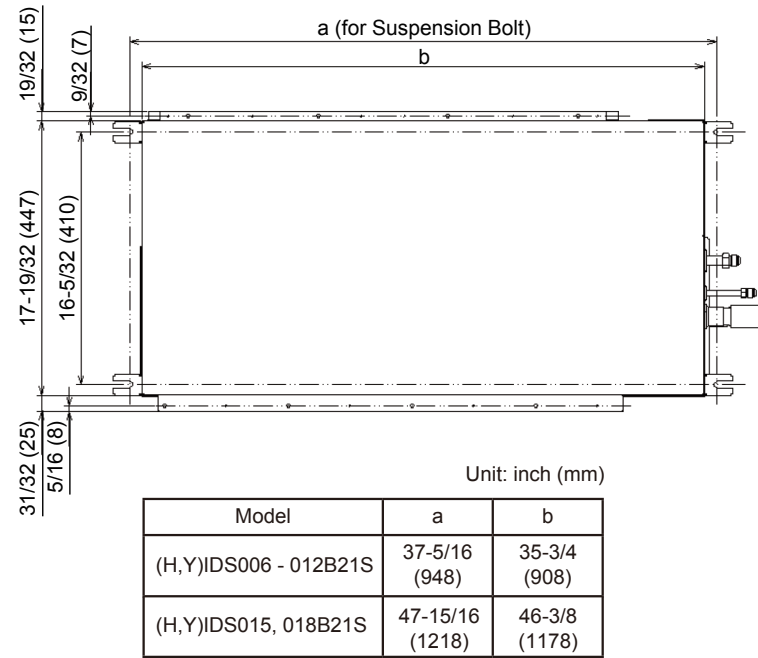
(2) Suspension bolts

- a. Select the final location and installation direction of the indoor unit, taking care to allow space for piping, wiring and maintenance.
- b. Mount the suspension bolts as shown below.



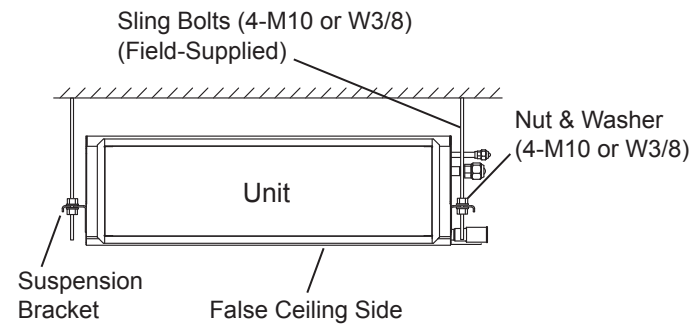
(Installation of Ducted Slim – continued)

(3) Mark the locations of the sling bolts, refrigerant piping connections and drain connection. Installation dimensions are shown below.



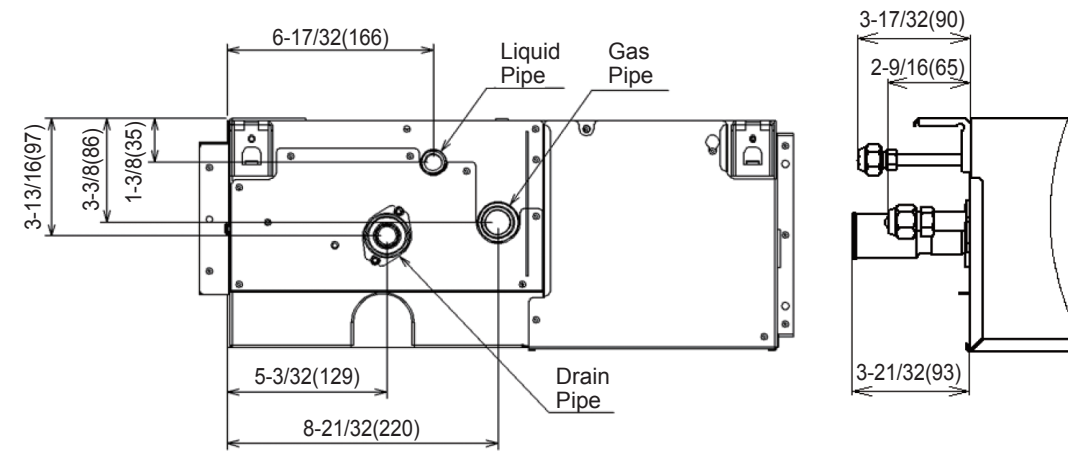
(4) Hang the indoor unit as shown below. Field-supplied parts:

- a. Sling bolts: 4-M10 or W3/8
- b. Nut: 4-M10 or W3/8



(Installation of Ducted Slim – continued)

(5) Position the liquid, gas and drain piping connections as shown below.

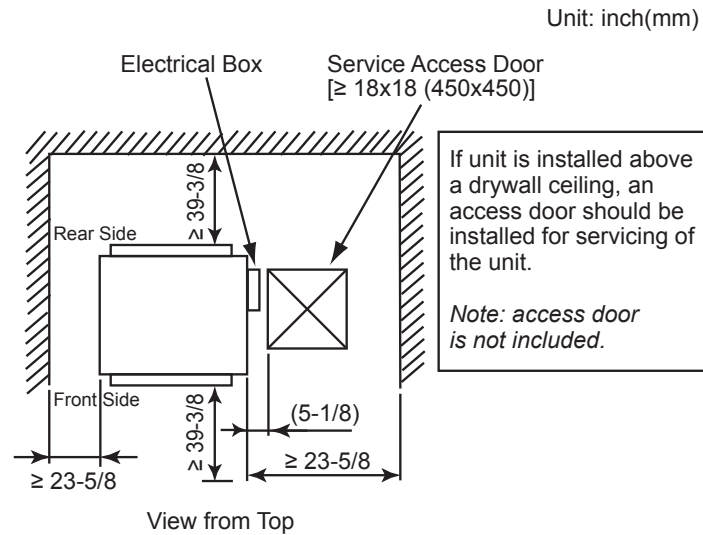


Other considerations:

1. Consider the air distribution from the indoor unit to the room, and select a suitable location so that uniform room temperature can be achieved and maintained.
 2. Do not install the unit where the airflow will blow directly on the thermostat, as this may result in an inaccurate room temperature measurement, causing the room to be uncomfortable.
- ****Always consult the full installation manual for complete information on how to install each VRF system component.

5. Installation of Ducted Medium Static

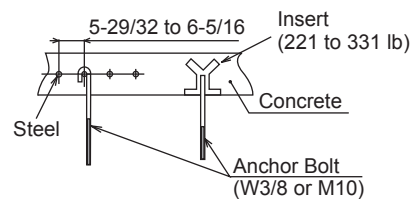
- (1) Install the indoor unit with sufficient clearance around it to provide working space for operation, maintenance and removal/replacement, as shown below.



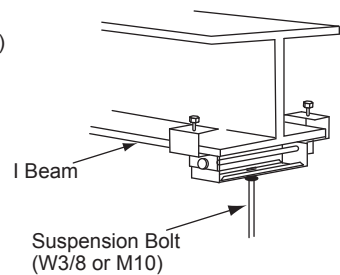
(2) Suspension bolts

- Select the final location and installation direction of the indoor unit, taking care to allow space for piping, wiring and maintenance.
- Mount the suspension bolts as shown below.

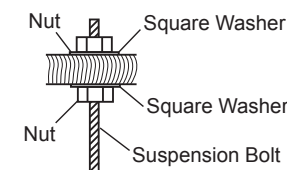
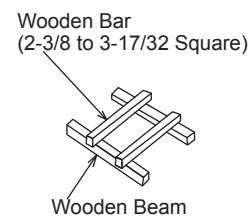
• For Concrete Slab



• For Steel Beam

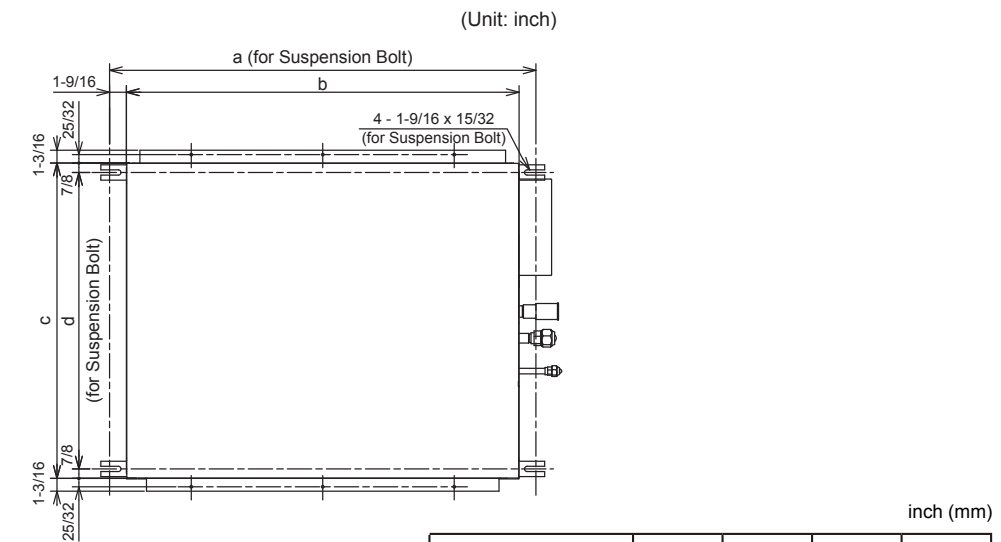


• For Wooden Beam Suspension



(Installation of Ducted Medium Static – continued)

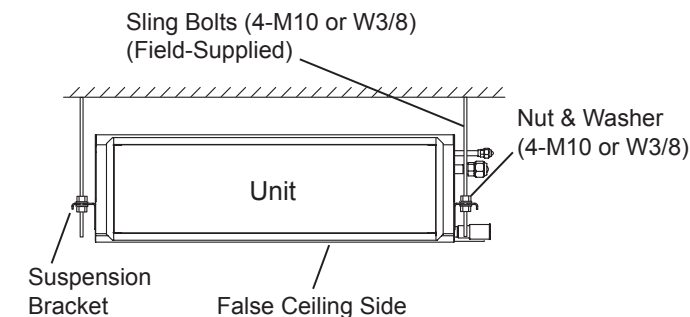
- (3) Mark the locations of the sling bolts, refrigerant piping connections and drain connection. Installation dimensions are shown below.



Model	a	b	c	d
(H,Y)IDM006B21S (H,Y)IDM008B21S (H,Y)IDM012B21S	27-9/16 (700)	25-19/32 (650)	28-11/32 (720)	26-5/8 (676)
(H,Y)IDM015B21S (H,Y)IDM018B21S	37-13/32 (950)	35-7/16 (900)	28-11/32 (720)	26-5/8 (676)
(H,Y)IDM024B21S (H,Y)IDM030B21S	45-9/32 (1,150)	43-5/16 (1,100)	31-1/2 (800)	29-3/4 (756)
(H,Y)IDM036B21S (H,Y)IDM048B21S	57-3/32 (1,450)	55-1/8 (1,400)	31-1/2 (800)	29-3/4 (756)

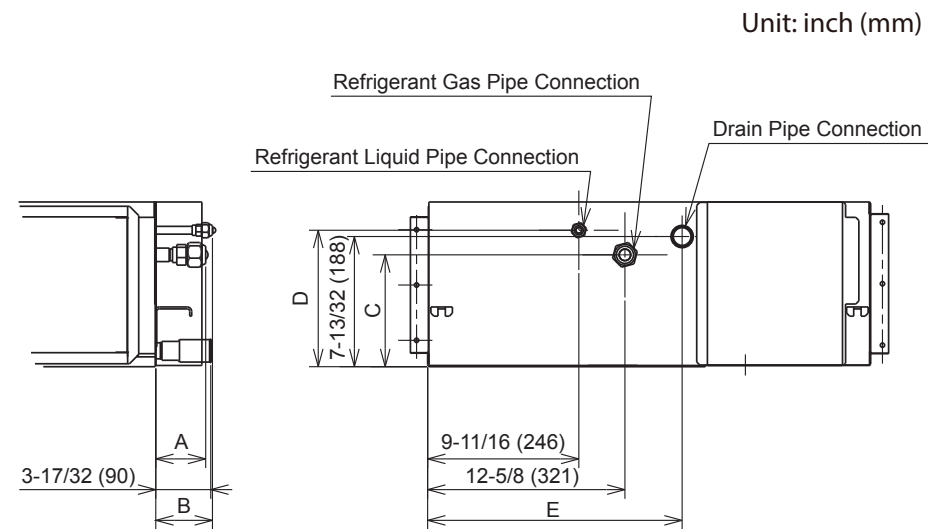
- (4) Hang the indoor unit as shown below. Field-supplied parts:

- Sling bolts: 4-M10 or W3/8
- Nut: 4-M10 or W3/8



(Installation of Ducted Medium Static – continued)

(5) Position the liquid, gas and drain piping connections as shown below.



Unit: inch (mm)

Model	A	B	C	D	E
(H,Y)IDM006 - 018B21S	3-1/32 (77)	3-5/8 (92)	7-5/32 (182)	8-3/4 (222)	16-17/32 (420)
(H,Y)IDM024 - 048B21S	3-5/32 (80)	3-15/16 (100)	7-15/16 (202)	9-19/32 (244)	15-13/16 (402)

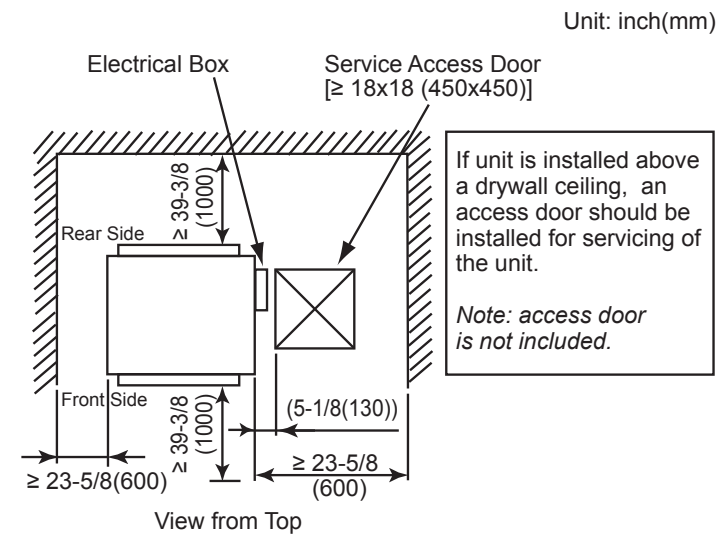
Other considerations:

1. Consider the air distribution from the indoor unit to the room, and select a suitable location so that uniform room temperature can be achieved and maintained.
2. Do not install the unit where the airflow will blow directly on the thermostat, as this may result in an inaccurate room temperature measurement, causing the room to be uncomfortable.

****Always consult the full installation manual for complete information on how to install each VRF system component.

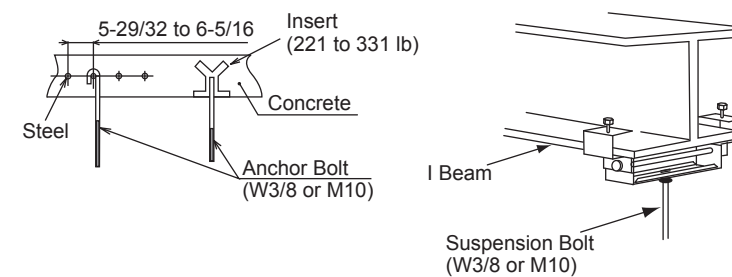
6. Installation of Ducted High Static

(1) Install the indoor unit with sufficient clearance around it to provide working space for operation, maintenance and removal/replacement, as shown below.

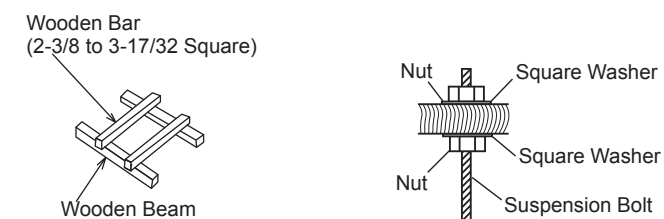


(2) Suspension bolts

- a. Select the final location and installation direction of the indoor unit, taking care to allow space for piping, wiring and maintenance.
- b. Mount the suspension bolts as shown at the right.

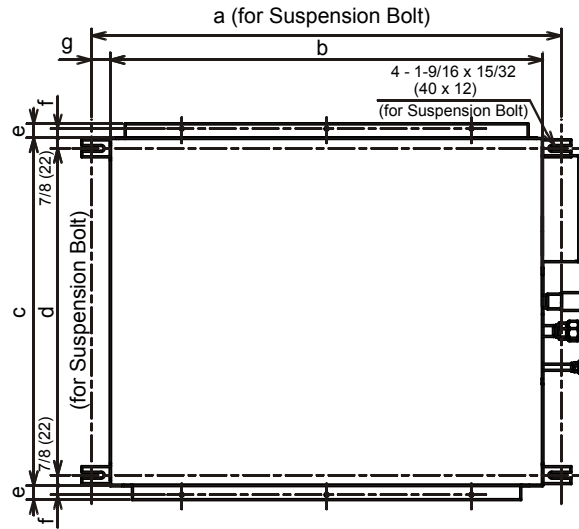


• For Wooden Beam Suspension



(Installation of Ducted High Static – continued)

(3) Mark the locations of the sling bolts, refrigerant piping connections and drain connection. Installation dimensions are shown below.

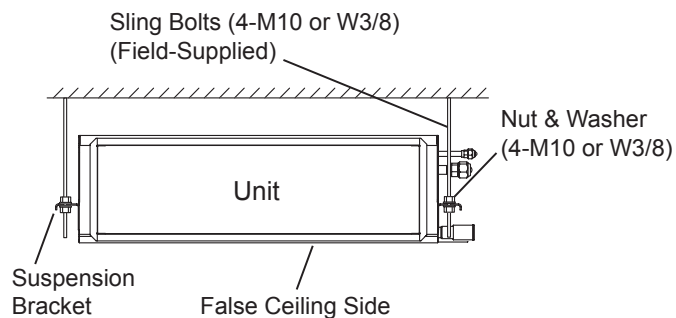


Unit: inch (mm)

Model	a	b	c	d	e	f	g
(H,Y)IDH018B21S	37-13/32 (950)	35-7/16 (900)	28-11/32 (720)	26-5/8 (676)	31/32 (25)	19/32 (15)	31/32 (25)
(H,Y)IDH024B21S (H,Y)IDH030B21S	38-19/32 (980)	35-7/16 (900)	31-1/2 (800)	29-3/4 (756)	1-3/16 (30)	25/32 (20)	1-9/16 (40)
(H,Y)IDH036B21S (H,Y)IDH048B21S	54-11/32 (1,380)	51-3/16 (1,300)	31-1/2 (800)	29-3/4 (756)	1-3/16 (30)	25/32 (20)	1-9/16 (40)

(4) Hang the indoor unit as shown below. Field-supplied parts:

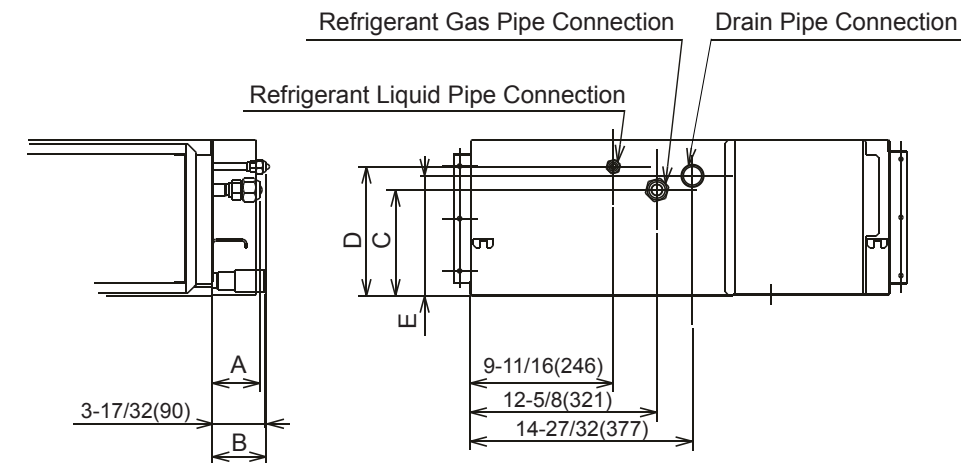
- a. Sling bolts: 4-M10 or W3/8
- b. Nut: 4-M10 or W3/8



(Installation of Ducted High Static – continued)

(5) Position the liquid, gas and drain piping connections as shown below.

Unit: inch (mm)



Unit: inch (mm)

Model	A	B	C	D	E
(H,Y)IDH018B21S	3-1/32 (77)	3-5/8 (92)	7-5/32 (182)	8-3/4 (222)	7-13/32 (188)
(H,Y)IDH024B21S	3-1/16 (78)	3-3/4 (95)	8-1/32 (204)	9-19/32 (244)	9-17/32 (242)
(H,Y)IDH030 - 048B21S	3-3/16 (81)	3-3/4 (95)	8-1/32 (204)	9-19/32 (244)	9-17/32 (242)

Other considerations:

1. Consider the air distribution from the indoor unit to the room, and select a suitable location so that uniform room temperature can be achieved and maintained.
 2. Do not install the unit where the airflow will blow directly on the thermostat, as this may result in an inaccurate room temperature measurement, causing the room to be uncomfortable.
- ****Always consult the full installation manual for complete information on how to install each VRF system component.



*Check our warranty certificate
for parts extended warranties.
For more details on terms,
conditions, and limitations, please
refer to the warranty certificate.*



Industry certified

York VRF systems are Intertek ETL Listed (Canada & USA), signifying that they comply with the standard of Heating and Cooling Equipment (ANSI/UL 1995 and CAN/CSA C22.2 No. 236-11, 4th Edition, October 14, 2011). The systems are also certified by the Air Conditioning, Heating & Refrigeration Institute.

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