

# 7ED-71

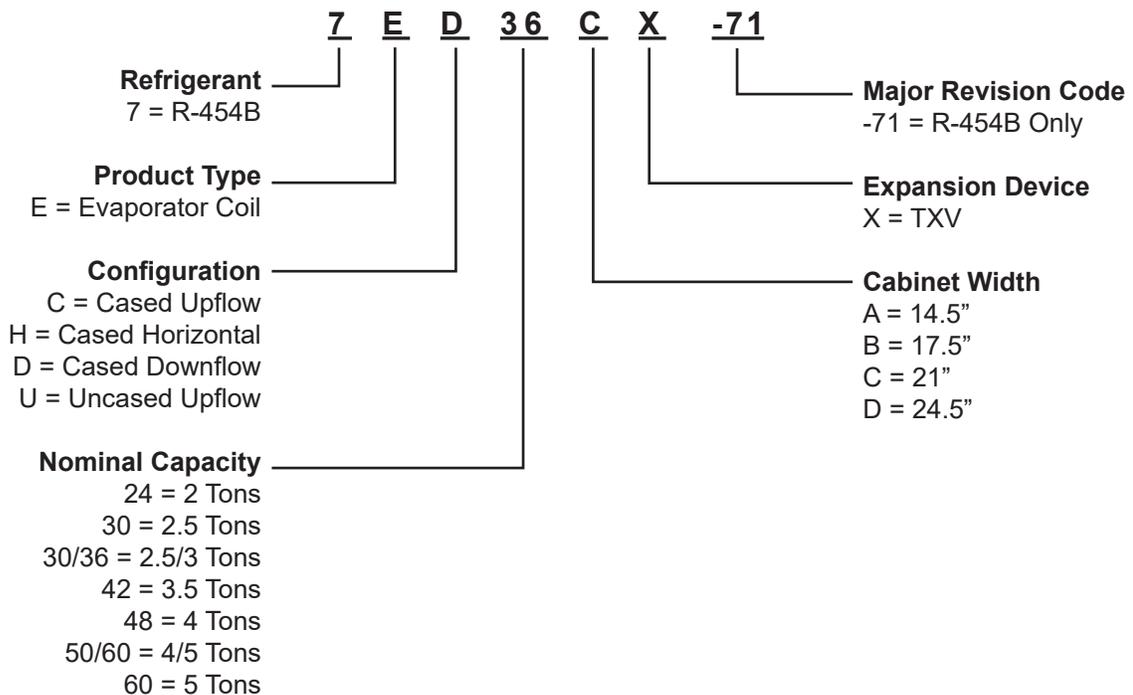
Downflow | Cased | Omniguard® Coil | TXV Furnished | R-454B

## RESIDENTIAL PRODUCT SPECIFICATIONS

2 to 5 Tons



### MODEL NUMBER IDENTIFICATION



## CONTENTS

Model Number Identification . . . . .	1
Approvals And Warranty . . . . .	2
Features. . . . .	2
Specifications . . . . .	4
Air Resistance. . . . .	4
Dimensions . . . . .	5
Dimensions - Furnace/Coil Combined Dimensions. . . . .	5

## APPROVALS AND WARRANTY

### **APPROVALS**

- Tested with matching air conditioners and heat pump units in the Allied Research Laboratory environmental test room in accordance with AHRI Standard 210/240-2023
- AHRI Certified system match-ups and expanded ratings, visit [www.alliedratings.com](http://www.alliedratings.com)
- Air resistance tests from Allied Laboratory air test chamber

### **WARRANTY**

10 Year limited parts warranty available when applied with a system.

Warranty must be registered online within 60 days of installation to qualify for 10-year coverage.

Unregistered equipment defaults to 5-year coverage.

See full warranty at [www.alliedair.com](http://www.alliedair.com) for terms, conditions, and exclusions.

## FEATURES

### **APPLICATIONS**

- 2 to 5 ton nominal sizes
- Downflow indoor coils can easily be installed with most branded downflow furnaces
- Factory installed R-454B, check/expansion valve

### **COIL CONSTRUCTION**

#### **Omniguard® Coil**

- Aluminum tubing, hairpins, distributor and header tubes
- Copper refrigerant sweat connections on both liquid and suction lines for easy brazing
- Ripple-edged aluminum fins
- Lanced fins provide maximum exposure of fin surface to air stream
- Axial grooved tubing provides superior heat transfer
- Twin coil construction assembled in an “A” configuration for large surface area
- High pressure testing insures leak-proof construction

#### **Refrigerant Line Connections**

- Copper refrigerant sweat connections on both liquid and suction lines for easy brazing
- Lines extend outside of the cabinet for ease of connection
- See dimension drawings for locations

#### **Braze-Free/Press Fitting Flexibility**

- Units can accommodate braze-free or press fittings for installation versatility

#### **Anti-Microbial Drain Pan**

- Non-corrosive, UV-resistant polymer drain pan with dual FPT drain connections
- Anti-Microbial additive resists growth of mold and mildew on drain pan which improves indoor air quality and reduces drain line blockage

#### **R-454B Check/Expansion Valve**

- All models have a factory-installed, internal check/expansion valve
- For use with R-454B systems
- Wide range valve
- Chatleff style fitting
- Expansion valves are externally-equalized, non-bleed port type

## FEATURES

### **LOW GWP REFRIGERANT DETECTION SYSTEM**

- Consists of an RDS detection sensor on the coil and a RDS control in the furnace

**NOTE** - Furnaces with a factory installed RDS control - The RDS control is integral to the furnace ignition control board.

Furnaces without a RDS control - The Refrigerant Detection System (RDS) Blower Control Board is required and must be ordered separately for field installation. See below for description and features.

#### **Refrigerant Detection System (RDS) Coil Sensor**

- Factory installed on all indoor coils
- Complies with UL 60335-2-40 approved standard
- Required for all systems using R-454B refrigerant
- Sensor ensures safe operation for systems equipped with R-454B refrigerant
- Indoor sensor will detect any R-454B refrigerant

#### Optional Accessories

#### **Refrigerant Detection System (RDS) Blower Control Board**

**NOTE** - For furnaces manufactured without the RDS Blower Control Board.

- Connects to the RDS sensor furnished with the coil Communicating Blower Control Board (Universal)
  - Communicating Blower Control Board and Sensor can be used universally with any branded communicating furnace or any non-communicating 24 volt furnace

#### **Non-Communicating Blower Control Board**

- Non-Communicating Blower Control Board and Sensor can be used with any non-communicating 24 volt furnace

#### **Standard Features**

- Connects to the RDS sensor furnished with the coil
- Supports up to two RDS Sensors (factory setting)
- Used as interface between indoor unit and thermostat to control system
- Ensures safe operation for systems equipped with R-454B refrigerant
- If R-454B refrigerant is detected the refrigerant detection system will prevent compressor and heating operation until R-454B refrigerant is no longer detected

- Refrigeration detection system also energizes the blower if R-454B refrigerant is detected to dissipate any concentrations of refrigerant from the conditioned space
- Multi-color LED for system status and as an aid in troubleshooting
- Flashing LED codes for system status (Green/Blue) and diagnosing Sensor errors (Red)
- Alarm relay can trigger an external alarm if R-454B refrigerant is detected
- Zone relay opens all zone dampers (if part of a zoning system) if R-454B refrigerant is detected
- Power is disabled to non-communicating thermostats to prevent demand if R-454B refrigerant is detected
- On system start-up blower will run for five minutes and any thermostat demands are disabled
- Dimensions (H x W x D): 7-7/16 x 7-7/16 x 2-1/2 (189 x 189 x 127 mm)

**NOTE** - Refer to the Installation Instructions for additional information.

#### **CABINET**

- Pre-painted heavy gauge steel
- Insulated with thick fiberglass insulation
- Coil slides out of cabinet for ease of servicing
- Flanges provided in outlet for ease of duct connection
- Removable panels provide access to coil
- Refrigerant lines extend outside of cabinet for easy installation Furnace Match-Up
- Coils exactly match corresponding furnaces with the same letter designation in model number
- No adaptor required
- Engaging holes furnished on cabinet for alignment with furnace

**NOTE** - "D" width coils do not match "C" width furnace width or openings. See Physical Matches drawing on page 6

## SPECIFICATIONS

## 2 TO 3 TON

Size		24A	24B	30/36B	30/36C
Nominal size - Tons		2	2	2.5 / 3	2.5 / 3
Refrigerant Type		R-454B	R-454B	R-454B	R-454B
Furnace Cabinet Matching Letter Width		A	B	B	C
Coil & Furnace Cabinet Width - in.		14-1/2	17-1/2	17-1/2	21
Connections	Liquid line (OD) sweat - in.	3/8	3/8	3/8	3/8
	Suction line (OD) sweat - in.	7/8	7/8	7/8	7/8
	Condensate drain (FPT) - in.	(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4
Indoor Coil	Net face area sq. ft.	4.08	4.08	4.67	4.67
	Tube diameter - in.	3/8	3/8	3/8	3/8
	Rows	3	3	3	3
	Fins - in.	14	14	14	14
Shipping Data - lbs.		44	51	52	60

## SPECIFICATIONS

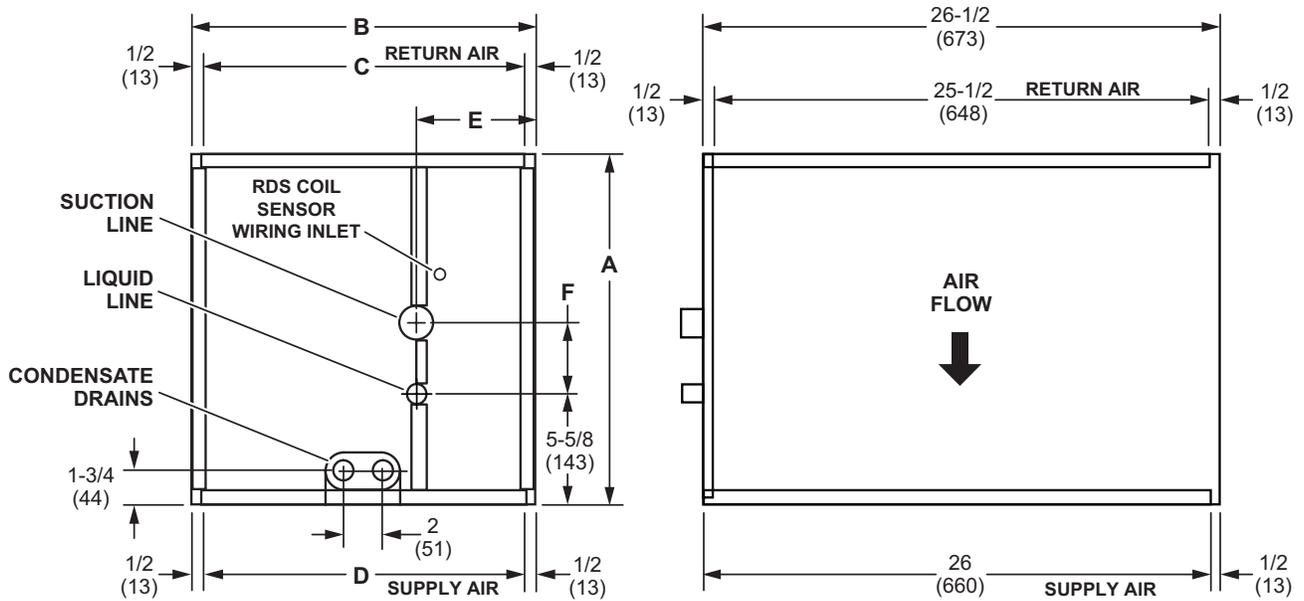
## 3.5 TO 5 TON

Size		42B	48C	50/60C	60D
Nominal size - Tons		3.5	4	4 / 5	5
Refrigerant Type		R-454B	R-454B	R-454B	R-454B
Furnace Cabinet Matching Letter Width		B	C	C	D
Coil & Furnace Cabinet Width - in.		17-1/2	21	21	24-1/2
Connections	Liquid line (OD) sweat - in.	3/8	3/8	3/8	3/8
	Suction line (OD) sweat - in.	7/8	7/8	7/8	7/8
	Condensate drain (FPT) - in.	(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4
Indoor Coil	Net face area sq. ft.	5.83	6.42	7.00	7.00
	Tube diameter - in.	3/8	3/8	3/8	3/8
	Rows	3	3	3	3
	Fins - in.	14	14	14	14
Shipping Data - lbs.		65	69	71	75

## AIR RESISTANCE

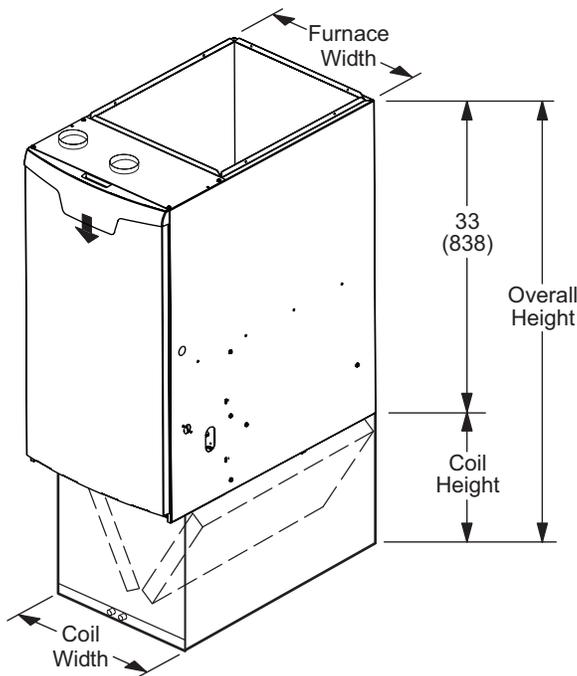
Size	Air Volume cfm	Total Resistance		Size	Air Volume cfm	Total Resistance	
		Dry Coil	Wet Coil			Dry Coil	Wet Coil
		in. w.g.	in. w.g.			in. w.g.	in. w.g.
24A	400	0.08	0.09	48C	800	0.09	0.10
	600	0.16	0.18		1000	0.11	0.13
	800	0.29	0.33		1200	0.15	0.18
	1000	0.45	0.49		1400	0.21	0.23
24B	600	0.11	0.13	1600	0.26	0.30	
	800	0.18	0.19	1800	0.34	0.37	
	1000	0.27	0.29	2000	0.4	0.44	
	1200	0.35	0.39	50/60C	800	0.09	0.11
	1400	0.47	0.51		1000	0.12	0.14
30/36B	600	0.1	0.12		1200	0.16	0.20
	800	0.15	0.18		1400	0.22	0.24
	1000	0.24	0.27		1600	0.27	0.32
	1200	0.32	0.36	1800	0.33	0.38	
	1400	0.43	0.47	2000	0.4	0.46	
30/36C	600	0.05	0.08	60D	800	0.09	0.08
	800	0.09	0.12		1000	0.13	0.13
	1000	0.13	0.17		1200	0.18	0.16
	1200	0.17	0.23		1400	0.16	0.21
	1400	0.24	0.30		1600	0.2	0.26
42B	600	0.08	0.10	1800	0.24	0.32	
	800	0.12	0.14	2000	0.29	0.39	
	1000	0.18	0.22				
	1200	0.25	0.30				
	1400	0.34	0.39				
	1600	0.43	0.49				

## DIMENSIONS



Size	A (Height)		B (Width)		C		D		E		F	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
24A	18	457	14 -1/2	368	13-1/2	343	13-1/2	343	4-5/8	117	3-5/8	92
24B	18	457	17-1/2	445	16-1/2	419	16-1/2	419	6-1/8	155	3-5/8	92
30/36B	23-1/2	597	17-1/2	445	16-1/2	419	16-1/2	419	6-1/8	155	4-3/4	121
30/36C	23-1/2	597	21	533	20	508	20	508	7-7/8	200	4-3/4	121
42B	23-1/2	597	17-1/2	445	16-1/2	419	16-1/2	419	6-1/8	155	6-3/8	162
48C	27-1/2	699	21	533	20	508	20	508	7-7/8	200	8-5/8	219
50/60C	27-1/2	699	21	533	20	508	20	508	7-7/8	200	10	254
60D	27-1/2	699	24-1/2	622	23-1/2	597	23-1/2	597	9-5/8	244	10-1/2	267

## DIMENSIONS - FURNACE/COIL COMBINED DIMENSIONS



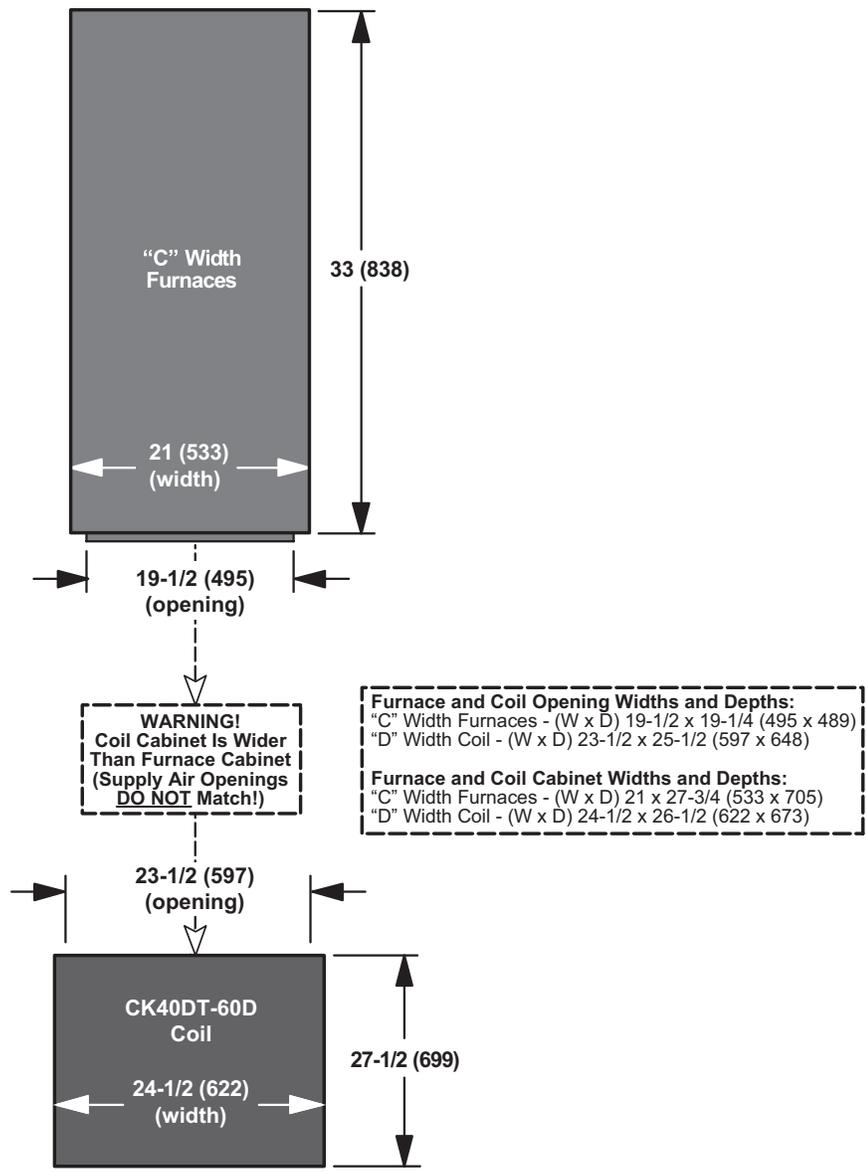
Size	Coil Width		Furnace Width		Coil Height		Overall Height	
	in.	mm	in.	mm	in.	mm	in.	mm
24A	14-1/2	368	14-1/2	368	18	457	51	1295
24B	17-1/2	445	17-1/2	445	18	457	51	1295
30/36B	17-1/2	445	17-1/2	445	23-1/2	597	56-1/2	1435
30/36C	21	533	21	533	23-1/2	597	56-1/2	1435
42B	17-1/2	445	17-1/2	445	23-1/2	597	56-1/2	1435
48C	21	533	21	533	27-1/2	699	60-1/2	1537
50/60C	21	533	21	533	27-1/2	699	60-1/2	1537
60D	24-1/2	622	24-1/2	622	27-1/2	699	60-1/2	1537

# DIMENSIONS

## PHYSICAL MATCHES

### DOWNFLOW GAS FURNACES – “C” WIDTH FURNACES WITH “D” WIDTH COIL

(NOTE – Coil DOES NOT match furnace cabinet width and depth or supply air opening width and depth!)





Contact us at 1-800-448-5872

**NOTE** - Due to our 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.

©2024 Allied Air Enterprises.