DURASTAR™

Air Handlers



DRF2TA

Constant Torque Motor (ECM)
Two-Stage Airflow
Thermal Expansion Valve (TXV)
Efficiencies: 13.4 to 14.3 SEER2

ISO 9001:2015

c UL us LISTED

AHRI CERTIFIED
www.ahridirectory.org
Unitary Small AC
AHRI Standard 210/240

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Features and Benefits

- Front or Bottom Return with aluminum tube and fin coil
- TXV for cooling or heat pump operation
- Wall-hanging brackets
- Built in Filter Rack
- Molex Plug Connections for field installed heater kits
- Dual Voltage Direct Drive Blower with multi-speed motor
- Thermoplastic Drain Pan with bottom primary and secondary connections
- Optional Decorative Grill for front return applications
- Optional Factory Installed Condensate Float Switch which shuts off the outdoor unit in the event the condensate pan becomes clogged
- Cabinet air leakage less than 2% at 1 inch H_2O when tested in accordance with ASHRAE Standard 193
- Can be field wired for single or two stage applications

Air Handlers

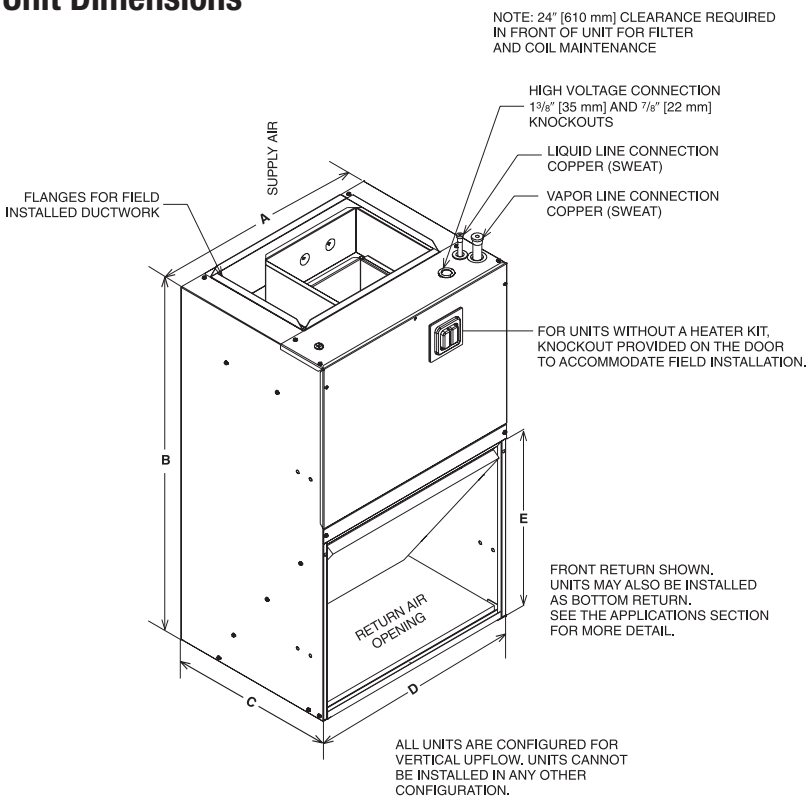
DR	F	2	T	A	24	21	A	S	T	N	J	B	0	F
Brand	**Product Category**	**Stages Of Airflow**	**Motor Type**	**Refrigerant**	**Capacity**	**Width**	**Major Series**	**Efficiency**	**Metering**	**Coil Series**	**Voltage**	**Disconnect**	**Factory Heat**	**Option Code**
DR - Durastar	F - Front Return	2 - 2-Stage	T - Constant Torque	A - R-410A	24 - 24,000 [7.03 kW] 36 - 36,000 [10.55 kW]	21 - 21" 24 - 24.5"	A - 1st Design	S - Standard	T - TXV	N - N Coil	J - 208-240/1/60	B - Breaker N - None	0 - No Heat 3 - 3 kW 5 - 5 kW 8 - 8 kW 1 - 10 kW	F - Float Switch

[ ] Designates Metric Conversions

Available Models	Description
DRF2TA2421ASTNJB3	2 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA2421ASTNJB3F	2 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA2421ASTNJB5	2 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA2421ASTNJB5F	2 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA2421ASTNJB8	2 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA2421ASTNJB8F	2 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA2421ASTNJB1	2 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA2421ASTNJB1F	2 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA2421ASTNJN0	2 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA2421ASTNJN0F	2 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA3624ASTNJB3	3 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA3624ASTNJB3F	3 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA3624ASTNJB5	3 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA3624ASTNJB5F	3 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA3624ASTNJB8	3 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA3624ASTNJB8F	3 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA3624ASTNJB1	3 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA3624ASTNJB1F	3 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA3624ASTNJN0	3 ton Two-Stage Front Return 208-240V Air Handlers
DRF2TA3624ASTNJN0F	3 ton Two-Stage Front Return 208-240V Air Handlers

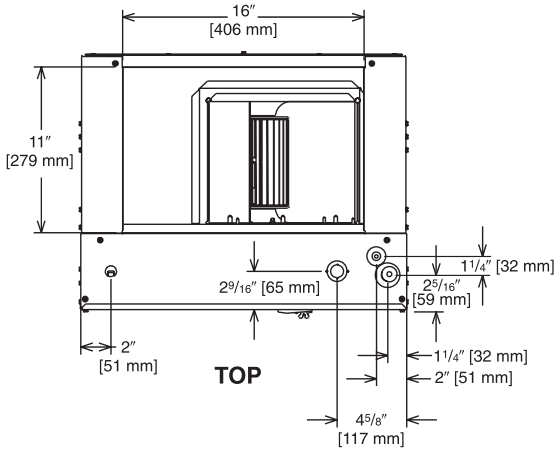
Standard Equipment
Exclusive Incoloy sheath type electric heating elements
Field convertible air supply
Durable framed cleanable air filter
Indoor coil design provides low air side pressure drop, high performance and compact size
PVC condensate elbow is standard on all coils
All indoor coils have aluminum tubing and aluminum fins
Molded polymer corrosion resistant condensate drain pan
Supply and return duct flanges
High and low voltage connection points inside cabinet
Concentric knockouts provided for power connection with hole size up to 2 inches [51 mm] for 1 1/2 inch [38mm] conduit
Internal checked TX valves for quiet refrigerant metering
Front refrigerant and drain connection
Fresh air knockouts

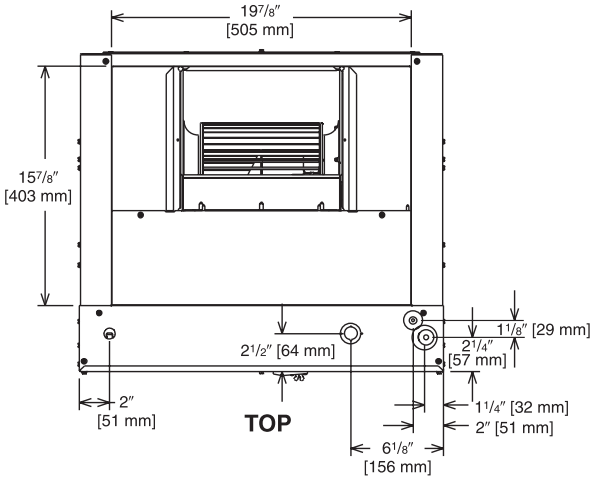
Unit Dimensions

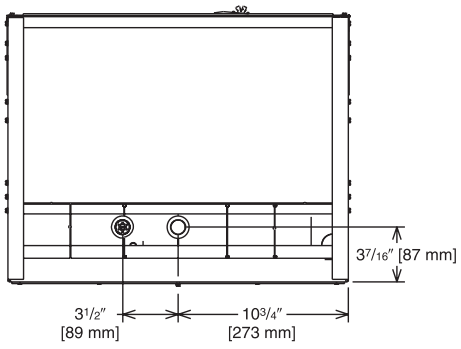


Return Air Opening Dimensions

Model Cabinet Size	Return Air Opening Width (Inches)	Return Air Opening Depth/Length (Inches)
17	15 7/8	19 3/4
21	19 3/8	19 3/4
24	22 7/8	19 3/4

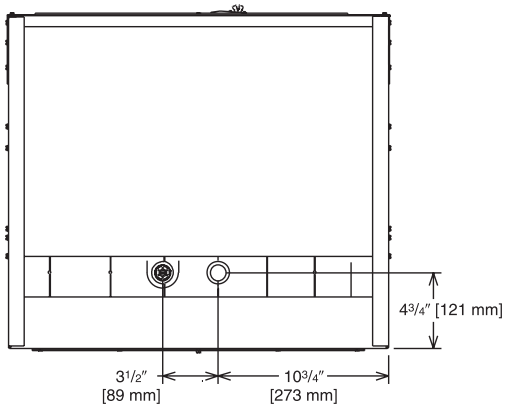






BOTTOM

1 1/2 & 2 TON [5.28 & 7.03 kW] MODELS



BOTTOM

2 1/2 & 3 TON [8.79 & 10.6 kW] MODELS

[ ] Designates Metric Conversions

Unit Dimensions & Weights

Model	(A) Unit Width In. [mm]	(B) Unit Height In. [mm]	(C) Unit Depth In. [mm]	(D) Return Air Opening Width In. [mm]	(E) Return Air Opening Height In. [mm]	Filter Size in. x in. x in. [mm x mm x mm]	Air Flow CFM (Nom.) [L/s]		Unit Weight/Shipping Weight (Lbs.) [kg]
							Low	High	
DRF2TA2421	21 1/2 [546.1]	36 [914.4]	17 [431.8]	20 [508.0]	17 7/16 [442.9]	20 X 20 X 1 [508 X 508 X 25.4]	600 [283]	800 [378]	95 [43] x 105 [48]
DRF2TA3624	24 [609.6]	36 [914.4]	21 [533.4]	23 [584.2]	21 3/8 [542.9]	20 X 25 X 1 [508 X 635 X 25.4]	1000 [472]	1200 [566]	95 [43] x 105 [48]

[ ] Designates Metric Conversions

Airflow Performance

Airflow performance data is based on cooling performance with a coil and no filter in place. Select performance table for appropriate unit size, voltage and number of electric heaters to be used. Make sure external static applied to unit allows operation within the minimum and maximum limits shown in table below for both cooling and electric heat operation. For optimum blower performance, operate the unit in the .3 [8 mm] to .7 inches [18 mm] W.C. external static range. Units with coils should be applied with a minimum of .1 inch [3 mm] W.C. external static range.

Airflow Operating Limits

Model Cabinet Size	21	24
Cooling BTUH x 1,000 Cooling Tons Nominal	-24 2	-36 3
Heat Pump or Air Conditioning Maximum Heat/Cool CFM [L/s] (37.5 CFM [18 L/s]/1,000 BTUH) (450 CFM [212 L/s]/Ton Nominal)	900 [425]	1350 [637]
Heat Pump or Air Conditioning Nominal Heat/Cool CFM [L/s] (33.3 CFM [16 L/s]/1,000 BTUH) (400 CFM [189 L/s]/Ton Nominal)	800 [378]	1200 [566]
Heat Pump or Air Conditioning Minimum Heat/Cool CFM [L/s] (30.0 CFM [14 L/s]/1,255 BTUH) (360 CFM [170 L/s]/Ton Nominal)	720 [340]	1080 [510]
Maximum kW Electric Heating & Minimum Electric Heat CFM [L/s]	10 690 [326]	10 976 [461]
Maximum Electric Heat Rise °F [°C]	44 [7]	44 [7]

[ ] Designates Metric Conversions

115V/208V/240V Airflow Performance Data—DRF2TA (Constant Torque (ECM) Motor)

Model/ Nominal Cooling Capacity	Air-Flow Range (Max/Min) CFM	Manufacturer Recommended Blower Size/ Motor HP # of Speeds	Motor Speed From Factory	Motor Speed	CFM Dry Delivery/filter/heaters/RPM/Watts External Static Pressure-Inches W.C.							
						0.1	0.2	0.3	0.4	0.5	0.6	0.7
DRF2TA24 1.5 Tons	825/510	10x6 1/3 Hp 2 speed dual voltage	4	2	CFM	537	495	451	404	343	286	252
					RPM	608	656	702	752	826	879	935
					Watts	51.2	54.5	57.6	60.9	65.9	69.5	73.2
			5	3	CFM	735	702	666	634	600	565	528
					RPM	757	794	836	872	905	942	981
					Watts	99.1	103.2	107.7	112	115.6	119.6	124.1
DRF2TA24 2 Tons	973/733	10x6 1/3 Hp 2 speed dual voltage	4	4	CFM	654	616	581	542	503	463	399
					RPM	694	736	777	818	858	899	971
					Watts	76.4	80.1	83.7	87.6	91.3	95.1	101.6
			5	5	CFM	887	858	830	802	771	743	717
					RPM	876	914	945	976	1014	1044	1070
					Watts	156	161.8	166.8	171.5	177.5	182.3	186.2
DRF2TA36 2.5 Tons	1145/894	10x8 1/2 Hp 2 speed dual voltage	4	2	CFM	772	698	635	569	497	438	366
					RPM	595	639	698	771	821	866	933
					Watts	82.9	84.9	91.6	100	105.8	110.7	118.3
			5	3	CFM	1106	1053	1004	962	918	864	814
					RPM	776	816	838	862	901	955	1007
					Watts	183.3	191.4	195.7	200.5	208.4	219.3	230.2
DRF2TA36 3 Tons	1306/1040	10x8 1/2 Hp 2 speed dual voltage	4	4	CFM	808	750	698	633	568	504	448
					RPM	615	665	713	780	842	884	929
					Watts	91.4	97.7	103.9	112.4	120.2	125.5	131.2
			5	5	CFM	1241	1201	1148	1109	1065	1028	983
					RPM	847	880	905	916	955	991	1035
					Watts	246.3	254.9	260.9	263.8	273.1	282.5	293.3

NOTE: All DRF2TA Air Handlers have 5 speed constant torque motors.
Speed tap 1 is for continuous fan. Speed tap 2 (low static) and speed tap 3 (high static) are for lower tonnage (1.5 or 2.5 tons). Speed tap 4 (low static) and speed tap 5 (high static) are for higher tonnage (2.0 or 3.0 tons).

DRF2TA Air Handlers are always shipped from factory at speed tap 4 and 5

- The airflow for continuous fan (speed tap 1) is always set at 50% of the speed tap 4.
- The above airflow table lists the airflow information for Air Handlers with maximum heater allowed for each model.

Electrical Data—Blower Motor Only—No Electric Heat

Model/Nominal Cooling Tons	Voltage	Phase	Hertz	HP [W]	RPM	Speeds	Circuit Amps.	Minimum Circuit Ampacity	Maximum Circuit Protector
DRF2TA2421	208/230	1	60	1/3 [249]	300-1100	4	1.9	3	15
DRF2TA3624	208/230	1	60	1/2 [373]	300-1100	4	2.7	4	15

*Blower motors are all single phase motors.

Electrical Data—with Electric Heat

Installation of the U.L. Listed original equipment manufacturer provided heater kits listed in the table below is recommended for all auxiliary heating requirements.

Cooling Capacity Tons	Model No.	Heater kW	PH/Hz	No. Elements - kW Per	(208/240V) Type Supply Circuit	Circuit Amps.	Motor Ampacity	Minimum Circuit Ampacity	Maximum Circuit Protection
DRF2TA3624	RXHJ-21B/T03J	2.25/3.0	1/60	1-3.0	Single	10.8/12.5	1.9	16/18	20/20
	RXHJ-21B/T05J	3.6/4.8	1/60	1-4.8	Single	17.3/20.0	1.9	24/28	30/30
	RXHJ-21B/T08J	5.4/7.2	1/60	2-3.6	Single	26.0/30.0	1.9	35/40	40/40
	RXHJ-21B/T10J	7.2/9.6	1/60	2-4.8	Single	34.6/40.0	1.9	46/53	50/60
DRF2TA3636	RXHJ-24B/T03J	2.25/3.0	1/60	1-3.0	Single	10.8/12.5	2.7	17/19	20/20
	RXHJ-24B/T05J	3.6/4.8	1/60	1-4.8	Single	17.3/20.0	2.7	25/29	30/30
	RXHJ-24B/T08J	5.4/7.2	1/60	2-3.6	Single	26.0/30.0	2.7	36/41	40/50
	RXHJ-24B/T10J	7.2/9.6	1/60	2-4.8	Single	34.6/40.0	2.7	47/54	50/60

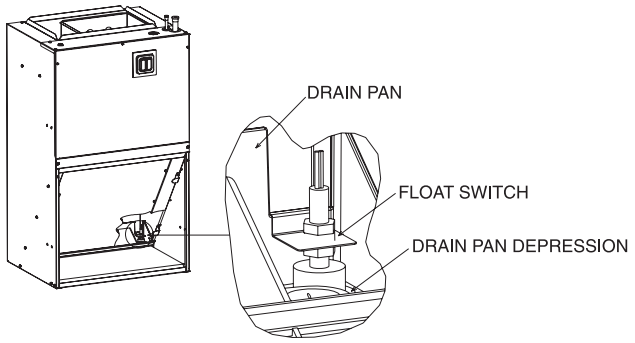
- Electric heater BTUH - (heater watts + motor watts) x 3.414 (see airflow table for motor watts.)
- J voltage (230V) single phase air handler is designed to be used with single or three phase.
- Supply circuit protective devices may be fused or “HACR” type circuit breakers.
- If non-standard fuse size is specified, use next size larger standard fuse size. Without the heater, bring only two leads to terminal block, cap, insulate and fully secure the third lead.
- Largest motor load is included in single circuit or circuit 1 of multiple circuits.
- Do not use 480 volts electrical heaters on 230 volts air handler.

Electrical Wiring: Power Wiring Grounding

- Field wiring must comply with the National Electrical Code
- This product must be sufficiently grounded in accordance with (C.E.C. in Canada) and any applicable local ordinance. National Electrical Code (C.E.C. in Canada) and any applicable
- Supply wiring must be 75°C minimum copper conductors only. Local ordinance.
- See electrical data for product Ampacity rating and Circuit.
- A grounding lug is provided. Protector requirement.

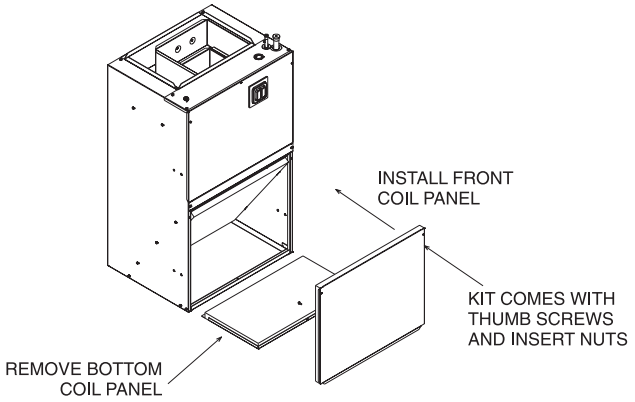
16.0 Accessories-Kits-Parts

- **Drain Pan Over Flow Switch RXHK-A01** is used to detect condensate drain blockage and will shut down the outdoor unit in order to prevent structural damage to the surrounding structures of the air handler.



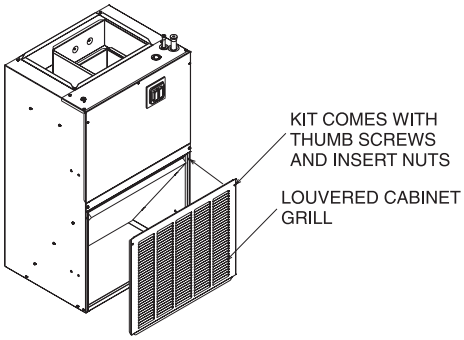
- **Bottom Return Conversion Kit RXHK-** is used to divert the return air from the factory standard front return to a bottom return.

Accessory Number	Indoor Unit
RXHK-B01	DRF2TA-FR18
	DRF2TA-FR24
	RF1T-FR24
RXHK-B02	DRF2TA-FR30
	DRF2TA-FR36
	RF1T-FR36

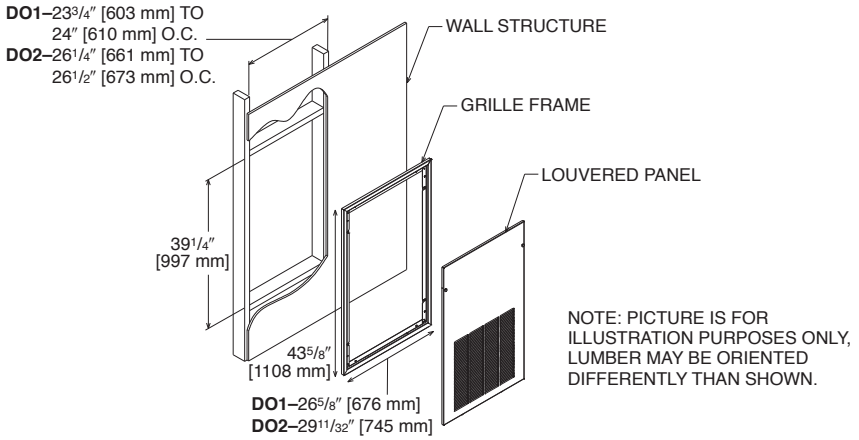


- **Louvered Cabinet Grill RXHK-** is used as decorative grill which covers the return air opening of the front return air handler.

Accessory Number	Indoor Unit
RXHK-C01	DRF2TA-FR18
	DRF2TA-FR24
	RF1T-FR24
RXHK-C02	DRF2TA-FR30
	DRF2TA-FR36
	RF1T-FR36



- **Decorative Wall Grill RXHK-D01** or **RXHK-D02** is used in applications where the air handler is installed in a closet or interior wall and allows adequate return air back to the unit. Please refer to RXHD-D01/RXHK-D02 installation instructions for complete dimensional information when selecting a decorative wall grill.



[ ] Designates Metric Conversions

GENERAL TERMS OF LIMITED WARRANTY*

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

Parts ..... Five (5) Years

***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.**

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.

"In keeping with its policy of continuous progress and product improvement, Durastar reserves the right to make changes without notice."

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PRINTED IN U.S.A. 2-24 QG FORM NO. HDS-582 REV. 3