



Advanced Distributor Products®

TC-SGRAH1-1005

October 05

*R Series - High Efficiency
Multi-position Air Handler
Engineering and Specification Guide
(Electric and No Heat)*

With optional field conversion downflow kit



Contents:	Page Number
Product Features	2
Physical Data	2
Nomenclature	3
Blower Performance	3
Electrical Data.....	4
Dimensions	5
Warranty	6



CERTIFICATION APPLIES ONLY
WHEN THE COMPLETE
SYSTEM IS LISTED
WITH ARI




Product improvement is a continuous process at Advanced Distributor Products. Therefore, product specifications are subject to change without notice and without obligation on our part. Please contact your ADP representative or distributor to verify details.

2175 West Park Place Blvd. Stone Mountain, GA 30087
770-465-5560 Fax: 770-465-5599
www.adpnow.com

Upgrade* HVAC Systems to 13+ SEER requirements with the R Series air handler.

*Depending on condenser match

Features & Benefits

- Two independent service panels. Easy access to coil because of non-captive panels.
- Brackets to hold coil assembly. When installing unit in horizontal position coil assembly won't move.
- Glued foil faced insulation and securing rods. Insulation will stay in place long term.
- Only four (4) screws to remove blower panel. Easy to service.
- Access panels with wrap around flange design. Improves cabinet rigidity and air tightness.
- *HydroTec™* Drain Pans with anti-microbial additive.  resists growth of mold and mildew on the drain pan which also reduces the likelihood of drain line blockage, improves indoor air quality.
- Low water retention drain pan design as proven by independent tests. Less moisture can be reintroduced into ductwork when the system is off and reduces the amount of mold and mildew growth in the pan.
- Drain pans are made of high temperature (450°) engineering polymer.
- Dual drain connections (3/4" FPT) on left and right. Quicker installation and flexibility.
- Cabinet constructed of heavy gauge painted steel. Reduces cabinet corrosion.
- Electrical connections can be made on top, right or left side. Flexibility of installation.
- Electric heat available factory installed or in kit form for field installation with plug in connections. Simplify installation of kits.
- Filter rack - built into every air handler. Easy service, reduce cost of installation.
- Fan time delay available as kit or factory installed. Improves application flexibility
- 2% or less air leakage, more energy efficient. Meets code requirements in certain areas.
- 5 year warranty, see warranty form for details.

Options:

- Downflow kit for field conversion, easy to install (kit consists of 2 brackets plus instructions).
- Single point connection.

Specs:

- Suitable for use with R-22 and R410a .
- Rifled Copper Tubing.
- Patented lanced fin design.
- Available voltage, 208/240v-60HZ-1PH.
- 40 VA control voltage transformer.
- Dynamically balanced blowers for quiet vibration free operation.
- High efficiency 2 speed motors.
- Refrigerant connections are 3/8" ODF liquid and 3/4" ODF (12 - 24) or 7/8" ODF (30 - 60) suction.
- Florators standard, Optional factory or field installed screw-on expansion valves available for R22, R410A, AC or HP.
- Circuit breaker optional factory installed or as kit, 5 - 10 Kw. Standard on 15 Kw and higher.
- All air handlers are top handling (basiloid) packaged with bar coding and full description on label.
- All coils are individually pressure tested at 450 PSI, then pressurized and sealed.
- ETL/UL Listed.
- Ratings in conformity with ARI Standard 210.

Physical Data

		Air Handler Size						
		18	24	30	36	42	48	60
Available Voltage		208/240v, 1ph						
Maximum Elec. Heat available (KW)		10	10	15	15	15	20	20
Transformer Size and Type		40VA, Class 2						
Blower Data	Wheel (dia. x width)	10 x 6	10 x 6	11 x 8	11 x 8	11 x 8	11 x 8	11.5 x 9
	Motor H. P.	1/4	1/4	1/4	1/3	1/3	1/2	1/2
	F. L. A. @ 240v	1.4	1.4	1.5	1.7	1.8	2.5	3.9
	Speed	2	2	2	2	2	2	2
	Nominal CFM	600	800	1000	1200	1400	1600	1850
Air Filter Size		16 x 20	16 x 20	18 x 20	18 x 20	18 x 25	18 x 25	18 x 25
Refrigerant Conn. (IDS) Suction		3/4	3/4	7/8	7/8	7/8	7/8	7/8
Refrigerant Conn. (IDS) Liquid		3/8	3/8	3/8	3/8	3/8	3/8	3/8
Florator Piston Size		53	59	67	73	80	84	93
Weights Approx. Lbs. (base unit w/out heat)		129	131	138	148	172	177	190

Model Nomenclature

R **C** **M** **XXX** **2** **24** - **S** **05** **2**

R = ADP entire unit painted

BLOWER MOTOR TYPE

C = Constant speed blower

AIRFLOW CONFIGURATION

V = Vertical Only

M = Multi-position
(upflow, left or right horizontal)

SLAB NUMBER

METERING DEVICE

2 = Florator

3 = Bleed TXV Valve (R-22)

4 = Non Bleed A/C TXV Valve (R-22)

5 = Non Bleed HP-A/C TXV Valve (R-22)

6 = Non Bleed A/C TXV Valve (R-410a)

9 = Non Bleed HP-A/C TXV Valve (R-410a)

UNIT SIZE (NOMINAL MBTUH)

18, 24, 30, 36, 42, 48, 60

VOLTAGE

- 1** = 240/208v, 1 ph. 60 hz
- 2** = 240/208v, 1 ph. 60 hz w/Time Delay
- 5** = 220v, 1 ph. 50 hz
- 6** = 220v, 1 ph. 50 hz w/Time Delay

HEAT

Note: Maximum 10 Kw per electrical supply circuit

	Kw ELEC.	SIZE	Kw Available
00	= 0 Kw ELEC.	18	5, 7.5, 10
05	= 5 Kw ELEC.	24	5, 7.5, 10
07	= 7.5 Kw ELEC.	30	5, 7.5, 10, 15
10	= 10 Kw ELEC.	36	5, 7.5, 10, 15
15	= 15 Kw ELEC.	42	5, 7.5, 10, 15
20	= 20 Kw ELEC.	48	5, 7.5, 10, 15, 20
		60	5, 7.5, 10, 15, 20

LINE VOLTAGE CONNECTIONS/CIRCUIT PROTECTION

	Amount of Heat					
	0	5	7.5	10	15	20
S = Stripped Wire	#	#				
T = Terminal Block		O	#	#		
B = Circuit Breaker		O	O	O	#	#

= Standard O = Optional

Air Handler Blower Performance (CFM vs. ESP inches H₂O)

All data is given while air handler is operating with a wet DX coil and air filter installed.

Speeds marked in **bold with an asterisk*** are the factory speed settings for both heating and cooling.

Different speeds can be set for heating mode. **See installation instructions for changing speeds and minimum settings on electric heat.**

Size	Electric Heat Models					
	Speed	.10	.20	.30	.40	.50
18	Low	754	716	674	626	569
	High*	1020	958	886	800	689
24	Low	998	938	868	786	681
	High*	1042	978	905	817	704
30	Low	1146	1091	1029	959	877
	High*	1349	1289	1224	1150	1066
36	Low	1407	1341	1268	1186	1090
	High*	1561	1481	1392	1290	1169

Size	Electric Heat Models					
	Speed	.10	.20	.30	.40	.50
42	Low	1785	1705	1616	1516	1402
	High*	1938	1846	1744	1629	1495
48	Low	1870	1789	1699	1599	1484
	High*	1943	1858	1765	1660	1540
60	Low	2077	1986	1886	1774	1646
	High*	2161	2066	1962	1845	1710

Electrical Data (240v. 60 cycle 1 ph)

Air Handler Size	Elec. Heating Cap.		Blower Amps		(2) (3) Total Amps Per Circuit						Total Unit Amps		Circuit Breaker Amps Per Stage	
	Kw	BTUH			208v			240v						
	(1) 240v	(1) 240v	208v	240v	1	2	3	1	2	3	208v	240v	1	2
18 & 24 (No Heat)	0	0	1.5	1.4	-	-	-	-	-	-	1.5	1.4	15	-
18 & 24	5	17,065	1.5	1.4	19.5	-	-	22.2	-	-	19.5	22.2	30	-
18 & 24	7.5	25,598	1.5	1.4	28.6	-	-	32.7	-	-	28.6	32.7	45	-
18 & 24	10	34,130	1.5	1.4	37.6	-	-	43.1	-	-	37.6	43.1	60	-
30 (No Heat)	0	0	1.6	1.5	-	-	-	-	-	-	1.6	1.5	15	-
30	5	17,065	1.6	1.5	19.6	-	-	22.3	-	-	19.6	22.3	30	-
30	7.5	25,598	1.6	1.5	28.7	-	-	32.8	-	-	28.7	32.8	45	-
30	10	34,130	1.6	1.5	37.7	-	-	43.2	-	-	37.7	43.2	60	-
30	15	51,195	1.6	1.5	37.7	18.1	-	43.2	20.8	-	55.7	64.0	60	30
36 (No Heat)	0	0	1.8	1.7	-	-	-	-	-	-	1.8	1.7	15	-
36	5	17,065	1.8	1.7	19.8	-	-	22.5	-	-	19.8	22.5	30	-
36	7.5	25,598	1.8	1.7	28.9	-	-	33.0	-	-	28.9	33.0	45	-
36	10	34,130	1.8	1.7	37.9	-	-	43.4	-	-	37.9	43.4	60	-
36	15	51,195	1.8	1.7	37.9	18.1	-	43.4	20.8	-	56.0	64.2	60	30
42 (No Heat)	0	0	1.9	1.8	-	-	-	-	-	-	1.9	1.8	15	-
42	5	17,065	1.9	1.8	20.0	-	-	22.6	-	-	20.0	22.6	30	-
42	7.5	25,598	1.9	1.8	29.0	-	-	33.1	-	-	29.0	33.1	45	-
42	10	34,130	1.9	1.8	38.0	-	-	43.5	-	-	38.0	43.5	60	-
42	15	51,195	1.9	1.8	38.0	18.1	-	43.5	20.8	-	56.1	64.3	60	30
48 (No Heat)	0	0	2.6	2.5	-	-	-	-	-	-	2.6	2.5	15	-
48	5	17,065	2.6	2.5	20.7	-	-	23.3	-	-	20.7	23.3	30	-
48	7.5	25,598	2.6	2.5	29.7	-	-	33.8	-	-	29.7	33.8	45	-
48	10	34,130	2.6	2.5	38.7	-	-	44.2	-	-	38.7	44.2	60	-
48	15	51,195	2.6	2.5	38.7	18.1	-	44.2	20.8	-	56.8	65.0	60	30
48	20	68,260	2.6	2.5	38.7	36.1	-	44.2	41.7	-	74.9	85.8	60	60
60 (No Heat)	0	0	4.1	3.9	-	-	-	-	-	-	4.1	3.9	15	-
60	5	17,065	4.1	3.9	22.2	-	-	24.7	-	-	22.2	24.7	30	-
60	7.5	25,598	4.1	3.9	31.2	-	-	35.2	-	-	31.2	35.2	45	-
60	10	34,130	4.1	3.9	40.2	-	-	45.6	-	-	40.2	45.6	60	-
60	15	51,195	4.1	3.9	40.2	18.1	-	45.6	20.8	-	58.3	66.4	60	30
60	20	68,260	4.1	3.9	40.2	36.1	-	45.6	41.7	-	76.3	87.2	60	60

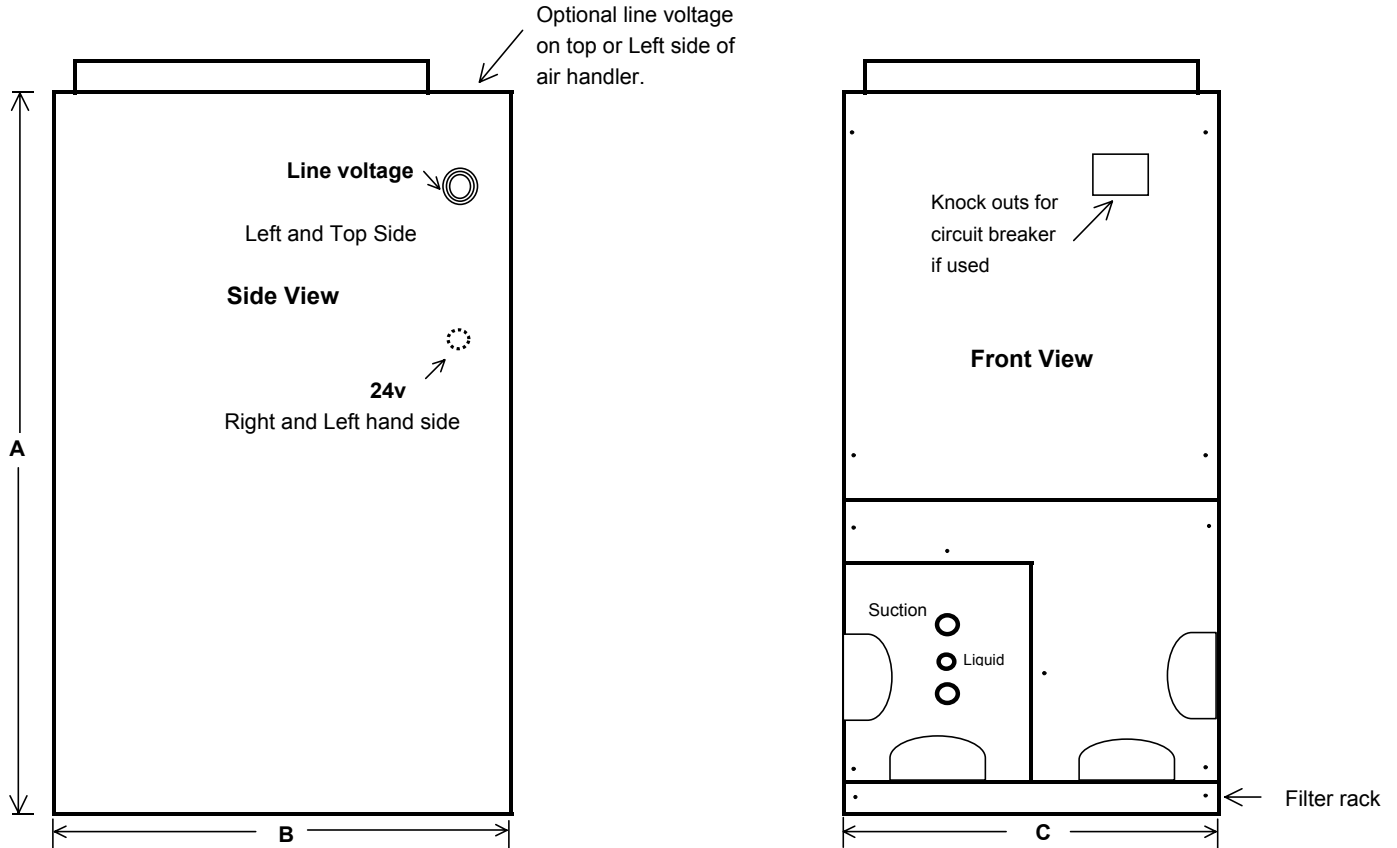
(1) For 208 volt use .751 correction factor for Kw & BTUH.

(2) 15 and 20 Kw (2 stage models) require 2 supply circuits.

(3) Circuit #1 includes blower motor amps.

Dimensions

Sizes 18 - 60



Unit Size	A	B	C	Supply Duct Opening		Return Duct Opening	
				Depth	Width	Depth	Width
18 & 24	46 3/4"	22"	18 1/2"	17"	16 1/2"	18 1/4"	13 1/2"
30 & 36	51"	22"	21 1/4"	17"	19 1/4"	18 1/4"	16 1/4"
42 & 48	54"	26"	21 1/4"	21"	19 1/4"	22 1/4"	16 1/4"
60	60"	26"	21 1/4"	21"	19 1/4"	22 1/4"	16 1/4"

Air Handler Limited Warranty

General Five Year Parts Warranty: This ADP equipment will perform at installation according to its specifications when installed, operated, repaired and serviced in strict accordance with the installation and maintenance instructions and using authorized service parts. This warranty applies only to ADP equipment installed within the United States and Canada.

If within five (5) years from the date of original installation any covered parts fail because of a manufacturing defect, ADP will provide a replacement part. You are responsible for all other costs of warranty service. ADP assumes no responsibility for any costs associated with the replacement of this part. The costs of refrigerant, refrigerant reclaiming, driers, filters, belts or freight charges along with miscellaneous material charges are not covered. Such costs may be covered by a separate warranty provided by the installing dealer or contractor. Replacement of failed parts by ADP will be provided through a qualified servicing dealer or contractor. ADP must receive written documentation of annual preventative maintenance, for this warranty to be valid. This should include a record of normal maintenance as outlined in the installation and servicing instructions or the owners manual, including all cleaning, lubrication and standard replacement.

Use of this product other than in a single-family residential application will limit the warranty to one (1) year for covered parts.

Covered parts include all parts of this unit except for the following Excluded Components, which are not covered by this warranty: cabinets, cabinet pieces, wiring and wiring harnesses.

This warranty will begin on the date of original installation whether or not the actual use begins on that date. If the date of original installation cannot be verified, the warranty will be deemed to begin six (6) months after the date of manufacture.

Warranty Procedure – When warranty parts are required, you should contact a qualified local contractor or dealer, and be prepared to provide the following information: complete model and serial number and date of installation, and an accurate description of the problem.

Limitation of Warranties - ADP makes no express warranties other than the warranties set forth above. All implied warranties, including the implied warranties of merchantability and fitness for a particular purpose are excluded to the extent legally permissible, or are limited to a period of one (1) year. Should such exclusion or limitation of warranty be unenforceable, such implied warranties are in any event limited to the duration of the express warranty, set forth above. Liability for incidental, punitive and/or consequential damages is excluded. Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitations of incidental, punitive or consequential damages, so the limitations or exclusions may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Conditions of Warranty - The furnishing of replacement parts under the terms of this warranty will apply to the original warranty period (including any extended warranty period) and will not serve to extend such period. This warranty is voided if the equipment is removed from the original installation site.

This warranty does not apply to damage or defect resulting from:

- Accident, or negligent or unreasonable use or operation of the equipment, including operation beyond rated capacity and operation of electrical components at voltages other than the rate specified in the nameplate.
- Modification, changes or alterations of the equipment, except as directed by ADP.
- Operation with system components, which do not match combinations listed in the Air Conditioning and Refrigeration Institute (ARI) Director of Certified Unitary Equipment or operation of this system with refrigerants other than as specified in the installation instructions.
- Damage as a result of flood, winds, fires, lightning, or exposure to corrosive elements or a corrosive environment (such as salt, chlorine, Fluorine, or other damaging chemicals).