

Manual S Compliance Report

Entire House

Air Ducks Heating & Air, Inc.

Job: Date:

By:

2601 NW 76th Ave, Gainesville, Fla 32653 Phone: 352-215-4624 Email: Airducksac@gmail.com Web: Airducksac.com

Project Information

For:

DWC Construction Thornwood Lot 21, Fla

Cooling Equipment

Design Conditions

Outdoor design DB:	91.9°F	Sensible gain:	28035	Btuh
Outdoor design WB:	76.2°F	Latent gain:	4835	Btuh
Indoor design DB:	75.0°F	Total gain:	32870	Btuh
Indoor RH:	50%	Estimated airflow:	1220	cfm

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:

Manufacturer:

Split ASHP

Trane

Model: 4TWR4036G1+TEM3A0C36S41++TDR

Actual airflow: Sensible capacity:

1220

cfm 29280 Btuh

104% of load

Latent capacity:

7320 Btuh

151% of load

Total capacity:

36600 111% of load SHR: 80% Btuh

Heating Equipment

Design Conditions

Outdoor design DB: Indoor design DB:

33.0°F 68.0°F Heat loss:

33629 Btuh Entering coil DB:

Entering coil DB:

Entering coil WB:

BUILDIN

Received

for

Code

ompliand

FILE COF

66.6°F

78.0°F

63.9°F

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:

Split ASHP

Manufacturer:

Trane

Model: 4TWR4036G1+TEM3A0C36S41++TDR

Actual airflow:

1220

Output capacity:

cfm 34200 Btuh

102% of load

Supplemental heat required:

0 Btuh Capacity balance:

33 °F Economic balance: -99 °F

Backup equipment type:

Manufacturer:

n/a

6.6

Model:

Actual airflow: Output capacity: 1220

cfm

Elec strip

kW 67% of load

Temp. rise:

25 °F

Meets all requirements of ACCA Manual S.

#d wrightsoft



Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

Form RPER 1 15 Mar 09

Header Information

Contractor:					REQUIRED ATTAC		ATTA	
Mechanical license:	Air Ducks Hea	ting & Air, In	nc.	or MJ1AE Fo	orm (and supporting w rm* (and supporting w ance data (heating, c	vorksheets):	Yes ☐ Yes ☐ Yes ☐	No No No
Building plan #:				Manual D Frid	ction Rate Worksheet		Yes	No 🗆
Home address (Street	or Lot#, Block, Su	ubdivision):	Thornwood Lot	Duct distribute 21, Entire House			Yes	No 🗆
HVAC LOAD C	ALCULATIO	N (IRC M1	401.3)	14 to 15				
Design Condition	ns		Bu	ilding Constru	uction Informati	ion		
Winter Design Coloutdoor temperature Indoor temperature Total heat loss: Summer Design Coloutdoor temperature Indoor temperature Grains difference: Sensible heat gain: Latent heat gain:	re: : onditions re: : 47	33 68 33629 92 75 gr/lb @ ⁵⁰ % 28932 4990	°F Btuh I	uilding Drientation: North, East, West, Sou Number of bedroon Conditioned floor an Number of occupan indows Eave overhang dep nternal shade: Blinds, drapes, etc.	nth, Northeast, Northwest, S ns: rea: uts:	r faces North outheast, Southwest 0 1843 ft² 5 0 ft blinds	Roof Eave Depth Wir	ndow
Total heat gain:		33922	Btuh 1	Number of skylights	i.	0	Y	
HVAC EQUIPM	ENT SELEC	TION (IRC	CM1401.3)	ELVY V			MY.T.	30,00%
Heating Equipm	ent Data		Cooling Eq	uipment Data	n i	Blower Data		
Equipment type: Furnace, Heat pump, E Model: 4TWR4 Heating output capa Heat pumps - capacity Aux. heating output	4036G1+TEM3A0 acity: at winter design outdo		Model: R Total cooling	capacity: ling capacity:	Split ASHP Trane M3A0C36S41++TDR 0 Btuh 0 Btuh 0 Btuh	Heating cfm: Cooling cfm: Static pressure: Fan's rated externi airflow	1220 1220 0.50 al static pressui)
HVAC DUCT D	STRIBUTIO	N SYSTEM	I DESIGN (IR	C M1601.1)				7-5-10
Design airflow: Equipment design ES Total device pressure Available static pres	P: 0 losses:	220 cfm .50 in H2O 0 in H2O .50 in H2O	Longest supply of Longest return de Total effective les Friction rate:		ft Trunk du		Fibergla	ss board
I declare the load ca listed above. I unde	alculation, equip	ment, equipm ns made on th	nent selection and nese forms will be	duct design were subject to review	rigorously performe and verification.	ed based on the b	uilding plar	
Contractor's printed	name:							
Contractor's signatu	re:		*;			Date:		

Reserved for County, Town Municipality or Authority having jurisdiction use.

^{*}Home qualifies for MJ1AE Form based on Abridged Edition Checklist





Load Short Form

Entire House

Air Ducks Heating & Air, Inc.

Job:

Date: Dec 07, 2020

By:

2601 NW 76th Ave, Gainesville, Fla 32653 Phone: 352-215-4624 Email: Airducksac@gmail.com Web: Airducksac.com

Project Information

For:

DWC Construction Thornwood Lot 21, Fla

Design Information					
	Htg	Clg		Infiltration	
Outside db (°F)	33	92	Method		Simplified
Inside db (°F)	68	75	Construction quality		Average
Design TD (°F)	35	17	Fireplaces		Ö
Daily range	-	M			
Inside humidity (%)	50	50			
Moisture difference (gr/lb)	29	47			

Make

Trane

HEATING EQUIPMENT

COOLING EQUIPMENT

mane	Tranc			IVIANC	Tranc			
Trade	TRANE			Trade	TRANE			
Model	4TWR4036G1			Cond	4TWR4036	G1		
AHRI ref	10344969			Coil	TEM3A0C3	86S41++TD	R	
				AHRI ref	10344969			
Efficiency		8.5 HSPF		Efficiency		11.5 EER,	14 SEEF	₹
Heating inp	out			Sensible co	ooling		29280	Btuh
Heating ou	tput	34200	Btuh @ 47°F	Latent cool			7320	Btuh
Temperatu	re rise	26	°F	Total coolir	ng		36600	Btuh
Actual air fl	ow	1220	cfm	Actual air f	low		1220	cfm
Air flow fac	tor	0.036	cfm/Btuh	Air flow fac	tor		0.044	cfm/Btuh
Static press	sure	0.50	in H2O	Static pres	sure		0.50	in H2O
Space ther	mostat				ble heat ratio		0.85	

Capacity balance point = 33 °F

Make

Trane

Backup: n/a

Input = 7 kW, Output = 22460 Btuh, 100 AFUE

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Master	316	7873	6299	286	274
Wic 1	48	927	415	34	18
wc	40	58	100	2	4
Master bath	215	4005	2036	145	89
living	449	7161	8031	260	349
kitchen/dining	243	2168	3508	79	153
bed 2	156	4573	2161	166	94
bath	54	1346	1682	49	73
bed 3	168	2149	937	78	41
hall	18	0	0	0	0
wic	42	1751	1689	64	74
Pantry	42	0	0	0	0
laundry	70	1617	1176	59	51



Entire House d Other equip loads Equip. @ 0.97 RSM Latent cooling	1861	33629 0	28035 0 27166 4835	1220	1220
TOTALS	1861	33629	32001	1220	1220



Project Summary Entire House Air Ducks Heating & Air, Inc.

Job:

Date: Dec 07, 2020

By:

2601 NW 76th Ave, Gainesville, Fla 32653 Phone: 352-215-4624 Email: Airducksac@gmail.com Web: Airducksac.com

Project Information

For:

DWC Construction Thornwood Lot 21, Fla

Notes:

Design Information

Weather: Ga	inesville Rgnl, FL, US	
-------------	------------------------	--

Winter	Design	Conditions
		Committee

Summer Design Conditions

Outside db Inside db	33 68	°F °F	Outside db Inside db	92 75	°F °F
Design TD	35	°F	Design TD Daily range	17 M	°F
			Relative humidity Moisture difference	50 47	% gr/lb

Heating Summary

Sensible Cooling Equipment Load Sizing

Structure	25863	Btuh	Structure	17962 Btuh
Ducts	7766	Btuh	Ducts	10073 Btuh
Central vent (0 cfm) (none)	0	Btuh	Central vent (0 cfm) (none)	0 Btuh
Humidification	0	Btuh	Blower	0 Btuh
Piping	Ō	Btuh		o Dian
Equipment load	33629	Btuh	Use manufacturer's data	n
			Rate/swing multiplier	0.97
	nfiltration		Equipment sensible load	27166 Btuh

Method	Simplified
Construction quality	Average
Firenlaces	'n

Latent Cooling Equipment Load Sizing

Fireplaces		Ŏ	Structure	2713	Btuh
			Ducts	2122	
	Heating	Cooling	Central vent (0 cfm) (none)	0	Btuh
Area (ft²) Volume (ft³)	1843 16207	1843 16207	Equipment latent load	4835	Btuh
Air changes/hour	0.38	0.20	Equipment Total Load (Sen+Lat)	32001	Btuh
Equiv. AVF (cfm)	103	54	Req. total capacity at 0.80 SHR	2.8	ton

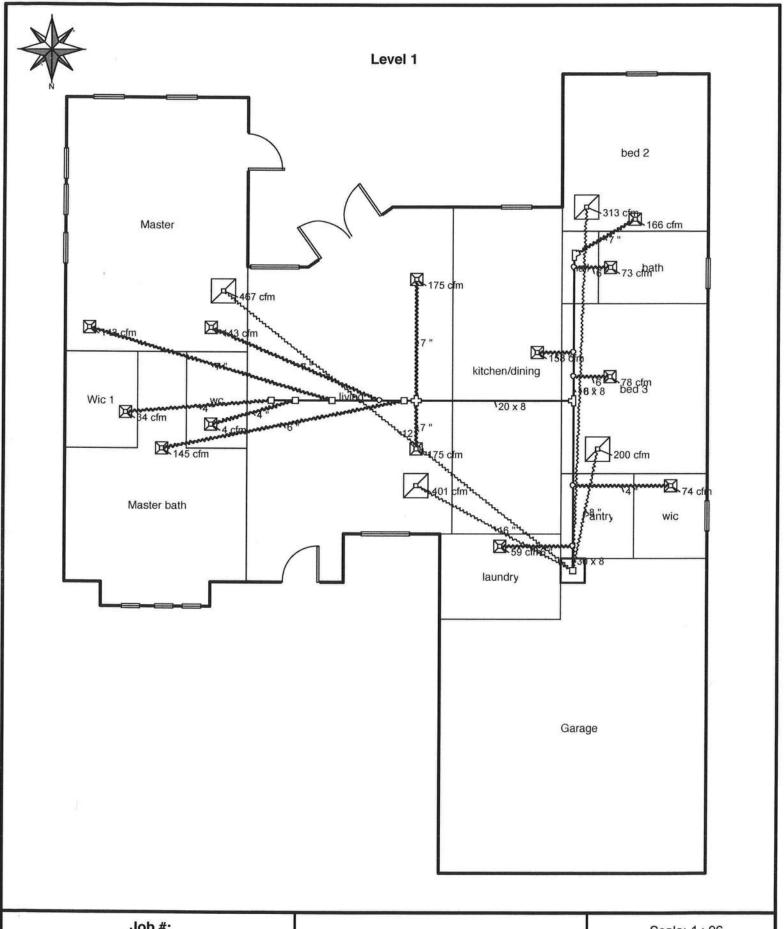
Heating Equipment Summary

Cooling Equipment Summary

Trade Model	Trane TRANE 4TWR4036G1 10344969		Make Trade Cond Coil AHRI ref	Trane TRANE 4TWR40360 TEM3A0C30 10344969	31 3S41++TDR		
Efficiency Heating input Heating outpu Temperature Actual air flow Air flow factor Static pressur Space thermo	ut rise / re	34200 26 1220 0.036	Efficiency Sensible co Latent cooli Total coolin Actual air fle Air flow fact Static press	ooling ng g ow oor	11.5 EER,	29280 7320 36600 1220 0.044	Btuh Btuh Btuh cfm

Capacity balance point = 33 °F

Backup: n/a Input = 7 kW, Output = 22460 Btuh, 100 AFUE



Job #: Performed for:

DWC Construction Thornwood Lot 21 Fla

Air Ducks Heating & Air, Inc.

2601 NW 76th Ave Gainesville, Fla 32653 Phone: 352-215-4624 Airducksac.com Airducksac@gmail.com Scale: 1:96

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... HVAC\DWC lot 25 thorne wood.ru



Duct System Summary

Entire House

Air Ducks Heating & Air, Inc.

Job:

Date: Dec 07, 2020

By:

2601 NW 76th Ave, Gainesville, Fla 32653 Phone: 352-215-4624 Email: Airducksac@gmail.com Web: Airducksac.com

Project Information

For:

DWC Construction Thornwood Lot 21, Fla

External static pressure Pressure losses Available static pressure Supply / return available pressure Lowest friction rate Actual air flow Total effective length (TEL)

Heating 0.50 in H2O 0 in H2O 0.50 in H2O 0.406 / 0.094 in H2O 0.097 in/100ft 1220 cfm

Cooling 0.50 in H2O 0 in H2O 0.50 in H2O 0.406 / 0.094 in H2O 0.097 in/100ft 1220 cfm

515 ft

Supply Branch Detail Table

Name		esign Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Master	h	3937	143	137	0.099	7.0	0x 0	VIFx	45.2	365.0	st3
Master bath	h	4005	145	89	0.097	6.0	0x0	VIFx	48.4	370.0	st3
Master-A	h	3937	143	137	0.099	7.0	0x0	VIFx	54.9	355.0	st3
Wic 1	h	927	34	18	0.105	4.0	0x0	VIFx	51.0	335.0	st3
bath	c	1682	49	73	0.154	6.0	0x 0	VIFx	28.0	235.0	st2
bed 2	h	4573	166	94	0.201	7.0	0x 0	VIFx	31.8	170.0	st2
bed 3	h	2149	78	41	0.148	6.0	0x 0	VIFx	19.0	255.0	st2
kitchen/dining	С	3508	79	153	0.153	8.0	0x 0	VIFx	21.0	245.0	st2
laundry	h	1617	59	51	0.191	6.0	0x 0	VIFx	8.0	205.0	st1
living	С	4015	130	175	0.135	7.0	0x 0	VIFx	31.0	270.0	st3
living-A	С	4015	130	175	0.132	7.0	0x 0	VIFx	37.0	270.0	st3
wc	c	100	2	4	0.104	4.0	0x 0	VIFx	44.3	345.0	st3
wic	С	1689	64	74	0.184	4.0	0x 0	VIFX	15.0	205.0	st1

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1 st3 st2	Peak AVF Peak AVF Peak AVF	1220 726 371	1220 735 361	0.097 0.097 0.148	732 661 668	15.7 13.0 9.3	8 x 30 8 x 20 8 x 10	RectFbg RectFbg RectFbg	st1 st1

Page 1

Return Branch Detail Table

• Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x V (in)	٧	Stud/Joist Opening (in)	Duct Matl	Trunk
rb3	0x 0	200	165	70.2	0.134	573	8.0	0x	0		VIFx	
rb4	0x 0	313	187	90.0	0.105	898	8.0	0x	0		VIFx	
rb2 rb1	0x 0 0x 0	257 449	401 467	74.8 97.0	0.126 0.097	287 595	16.0 12.0	0x 0x	0		VIFx VIFx	



Certificate of Product Ratings

AHRI Certified Reference Number: 201763659

Date: 12-07-2020

Model Status: Active

AHRI Type: HRCU-A-CB (Split System: Heat Pump with Remote Outdoor Unit-Air-Source)

Series: XR14

Outdoor Unit Brand Name: TRANE

Outdoor Unit Model Number (Condenser or Single Package): 4TWR4036G1

Indoor Unit Model Number (Evaporator and/or Air Handler): TEM4A0B36S31+TDR

The manufacturer of this TRANE product is responsible for the rating of this system combination.

Rated as follows in accordance with the latest edition of AHRI 210/240 with Addendum 1, Performance Rating of Unitary Air-Conditioning & Air-Source Heat Pump Equipment and subject to rating accuracy by AHRI-sponsored, independent, third party testing:

Cooling Capacity (A2) - Single or High Stage (95F), btuh: 35000

SEER: 14.00

EER (A2) - Single or High Stage (95F): 11.50

Heating Capacity (H12) - Single or High Stage (47F) : 34400

HSPF (Region IV): 8.20

†"Active" Model Status are those that an AHRI Certification Program Participant is currently producing AND selling or offering for sale; OR new models that are being marketed but are not yet being produced. "Production Stopped" Model Status are those that an AHRI Certification Program Participant is no longer producing BUT is still selling or offering for sale.

Ratings that are accompanied by WAS indicate an involuntary re-rate. The new published rating is shown along with the previous (i.e. WAS) rating

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CERTIFICATE VERIFICATION

The information for the model cited on this certificate can be verified at www.ahridirectory.org, click on "Verify Certificate" link and enter the AHRI Certified Reference Number and the date on which the certificate was issued. which is listed above, and the Certificate No., which is listed at bottom right.

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AIR-CONDITIONING, HEATING, & REFRIGERATION INSTITUTE

we make life better™

132518520519674749 CERTIFICATE NO.:



Manual S Compliance Report

Entire House

Air Ducks Heating & Air, Inc.

Job:

Date: Dec 07, 2020

2601 NW 76th Ave, Gainesville, Fla 32653 Phone: 352-215-4624 Email: Airducksac@gmail.com Web: Airducksac.com

Project Information

For:

DWC Construction Thornwood Lot 21, Fla

Cooling Equipment

Design Conditions

Outdoor design DB: 91.9°F Outdoor design WB: Indoor design DB:

76.2°F 75.0°F Sensible gain: Latent gain: Total gain:

28035 Btuh 4835 Btuh 32870 Btuh

cfm

Entering coil DB: 78.0°F Entering coil WB: 63.9°F

Indoor RH:

50%

Estimated airflow:

1220

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:

Split ASHP

Manufacturer:

Trane

Model: 4TWR4036G1+TEM3A0C36S41++TDR cfm

Actual airflow: Sensible capacity:

1220 29280

Btuh Btuh 104% of load 151% of load

Latent capacity: Total capacity:

7320 36600 Btuh

111% of load SHR: 80%

Heating Equipment

Design Conditions

Outdoor design DB: Indoor design DB:

33.0°F 68.0°F Heat loss:

33629

Btuh

Entering coil DB:

66.6°F

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:

Split ASHP

Manufacturer:

Trane

Model: 4TWR4036G1+TEM3A0C36S41++TDR

Actual airflow:

1220

102% of load

Output capacity:

34200

Btuh

cfm

Supplemental heat required:

0 Btuh Capacity balance: Economic balance:

33 °F -99 °F

Backup equipment type:

Elec strip

Manufacturer:

n/a

1220 cfm

Actual airflow: Output capacity:

6.6

kW 67% of load

Temp. rise:

25 °F

Meets all requirements of ACCA Manual S.

wrightsoft

Right-Suite® Universal 2019 19.0.21 RSU23127

Model:

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Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

Form RPER 1 15 Mar 09

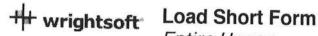
Header Information

	Hea	der Information	
Contractor:		REQUIRED ATTAC	
Mechanical license:	Heating & Air, Inc.	Manual J1 Form (and supporting v or MJ1AE Form* (and supporting v	worksheets): Yes \(\square\) No \(\square\)
Building plan #:	107	OEM performance data (heating, of Manual D Friction Rate Workshee)	cooling, blower): Yes No
Home address (Street or Lot#, Block	k, Subdivision): Thornwood L	Duct distribution sketch: ot 21, Entire House	Yes No
HVAC LOAD CALCULAT			
Design Conditions		uilding Construction Informat	ion
Winter Design Conditions Outdoor temperature: Indoor temperature: Total heat loss: Summer Design Conditions Outdoor temperature: Indoor temperature: Grains difference:	33 °F 68 °F 33629 Btuh	Building Orientation: Front Doo North, East, West, South, Northeast, Northwest, S Number of bedrooms: Conditioned floor area: Number of occupants: Windows	
Sensible heat gain: Latent heat gain:	47 gr/lb @50% RH 28932 Btuh	Eave overhang depth: Internal shade: Blinds, drapes, etc.	0 ft blinds Eave 1
Total heat gain:	4990 Btuh 33922 Btuh	Number of skylights:	Depth Window
HVAC EQUIPMENT SEL Heating Equipment Data	Name	quipment Data	Blower Data
Equipment type: Furnace, Heat pump, Boiler, etc. Model: 4TWR4036G1+TEM Heating output capacity: Heat pumps - capacity at winter design Aux. heating output capacity:	Split ASHP Equipment Air Condition Trane Model: 3A0C36S41++TDR Total cooling Sensible	type: Split ASHP oner, Heat pump, etc. Trane 4TWR4036G1+TEM3A0C36S41++TDR ng capacity: 0 Btuh pooling capacity: 0 Btuh ling capacity: 0 Btuh	Heating cfm: 1220 Cooling cfm: 1220 Static pressure: 0.50 in H2O Fan's rated external static pressure for design
HVAC DUCT DISTRIBUT	ION SYSTEM DESIGN (IF	RC M1601.1)	
Design airflow: Equipment design ESP: Total device pressure losses: Available static pressure (ASP):	1220 cfm Longest supply 0.50 in H2O Longest return 0 in H2O Total effective I	duct: 418 ft Duct Ma	
I declare the load calculation, eq listed above. I understand the cl	uipment; equipment selection an laims made on these forms will b	d duct design were rigorously performe e subject to review and verification.	ed based on the building plan
Contractor's printed name: Contractor's signature:			Date:
	The state of the s		

Reserved for County, Town Municipality or Authority having jurisdiction use.

^{*}Home qualifies for MJ1AE Form based on Abridged Edition Checklist





Entire House

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Project Information

For:

DWC Construction Thornwood Lot 21, Fla

Design Information						
Outside db (°F) Inside db (°F) Design TD (°F) Daily range Inside humidity (%) Moisture difference (gr/lb)	Htg 33 68 35 - 50 29	Clg 92 75 17 M 50 47	Method Construction quality Fireplaces	Infiltration	Simplified Average 0	

Make

Trane

HEATING EQUIPMENT

COOLING EQUIPMENT

Mandal	ITANL			Trade	TRANE		
Model	4TWR4036G1			Cond	4TWR4036	G1	
AHRI ref	10344969			Coil		36S41++TDR	
Efficiency				AHRI ref	10344969		
Efficiency		8.5 HSPF		Efficiency		11.5 EER, 14 SE	ER
Heating inp				Sensible co	ooling		0 Btuh
Heating out		34200	Btuh @ 47°F	Latent cool			0 Btuh
Temperatur		26	°F	Total coolin	•		0 Btuh
Actual air flo		1220	cfm	Actual air fl			0 cfm
Air flow fact		0.036	cfm/Btuh	Air flow fact			4 cfm/Btuh
Static press	sure	0.50	in H2O	Static press			0 in H2O
Space therr	mostat	(70.00			ole heat ratio		
	lance point = 33 °F			Load Selisii	ole fleat fatio	0.8	5

Backup: n/a

Make

Trade

Trane

TRANE

Input = 7 kW, Output = 22460 Btuh, 100 AFUE

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Master	316	7873	6299	286	274
Wic 1	48	927	415	34	18
wc	40	58	100	2	4
Master bath	215	4005	2036	145	89
iving	449	7161	8031	260	349
titchen/dining	243	2168	3508	79	153
ped 2	156	4573	2161	166	94
path	54	1346	1682	49	73
ped 3	168	2149	937	78	41
nall ·	18	0	0	0	0
vic	42	1751	1689	64	74
Pantry	42	0	0	0	0
aundry	70 1	1617	1176	59	51

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



2021-Apr-21 12:58:53

Entire House d Other equip loads Equip. @ 0.97 RSM Latent cooling	1861	33629 0	28035 0 27166 4835	1220	1220
TOTALS	1861	33629	32001	1220	1220



Project Summary Entire House Air Ducks Heating & Air, Inc.

Job:

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Project Information

For:

DWC Construction Thornwood Lot 21, Fla

Notes:

Design Information

Weather: Gainesville Rgnl, FL, US

Winter Design Conditions

Outside db	33	°F
Inside db	68	°F
Design TD	35	°F

Heating Summary

Structure Ducts Central vent (0 cfm)	25863 7766 0	Btuh Btuh Btuh
(none) Humidification	0	Btuh
Piping Equipment load	33629	Btuh Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

Area (ft²)	Heating 1843	Cooling 1843
Volume (ft³)	16207	16207
Air changes/hour	0.38	0.20
Equiv. AVF (cfm)	103	54

Heating Equipment Summary

Make	Trane
Trade	TRANE
Model AHRI ref	4TWR4036G1 10344969
Efficiency	

Efficiency	8.5	HSPF
Heating input		
Heating output	34200	Btuh @ 47°F
Temperature rise	26	°F
Actual air flow	1220	cfm
Air flow factor	0.036	cfm/Btuh
Static pressure		in H2O
Space thermostat		

Capacity balance point = 33 °F

Backup: n/a Input = 7 kW, Output = 22460 Btuh, 100 AFUE

Summer Design Conditions

Outside db Inside db	92 75	°F °F
Design TD	17	°F
Daily range	M	
Relative humidity	50	%
Moisture difference	47	gr/lb

Sensible Cooling Equipment Load Sizing

Structure Ducts Central vent (0 cfm) (none) Blower	17962 10073 0	
Use manufacturer's data Rate/swing multiplier Equipment sensible load	n 0.97 27166	Btuh

Latent Cooling Equipment Load Sizing

Structure Ducts Central vent (0 cfm) (none)	2713 2122 0	Btuh Btuh Btuh
Equipment latent load	4835	Btuh
Equipment Total Load (Sen+Lat) Req. total capacity at 0.80 SHR	32001 2.8	Btuh ton

Cooling Equipment Summary

Trade	TRANE			
Cond	4TWR40360	3 1		
Coil	TEM3A0C36	S41++TDR		
AHRI ref	10344969			
Efficiency		11.5 EER,	14 SEEF	3
Sensible co	poling		29280	Btuh
Latent cool			7320	Btuh
Total coolin	ng		36600	Btuh
Actual air f	low		1220	cfm
Air flow fac	tor		0.044	cfm/Btuh
Static press	sure		0.50	in H2O

Load sensible heat ratio 0.85

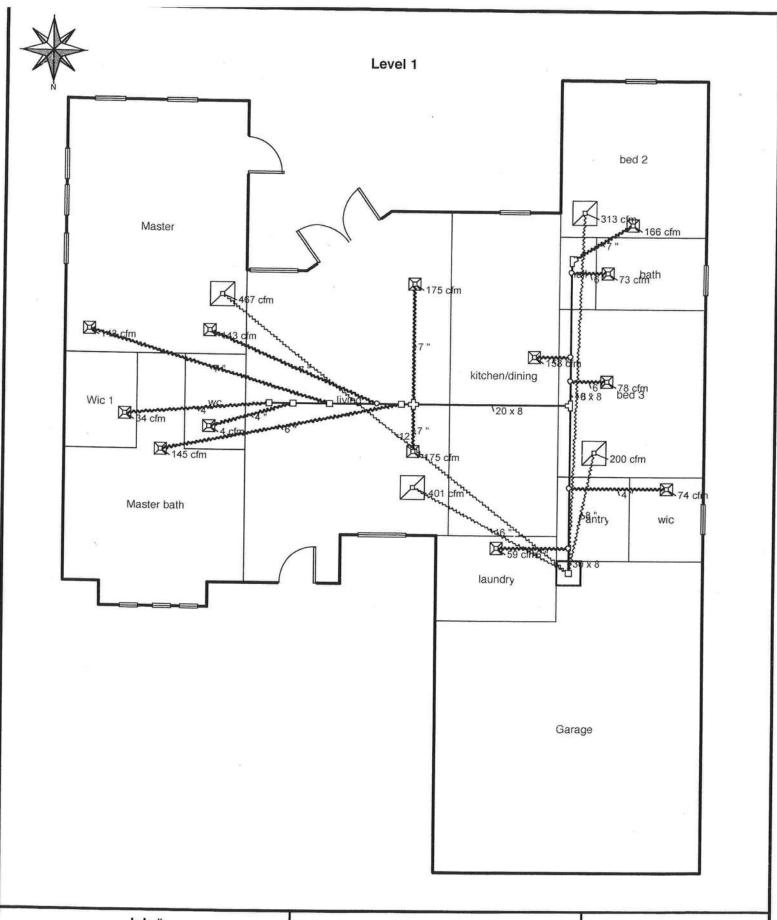
Trane

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.

Make



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Job #: Performed for:

DWC Construction Thornwood Lot 21 Fla

Air Ducks Heating & Air, Inc.

2601 NW 76th Ave Gainesville, Fla 32653 Phone: 352-215-4624 Airducksac.com Airducksac@gmail.com Scale: 1:96

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wrightsoft Duct System Summary

Entire House

Air Ducks Heating & Air, Inc.

Job:

Date: Dec 07, 2020

2601 NW 76th Ave, Gainesville, Fla 32653 Phone: 352-215-4624 Email: Airducksac@gmail.com Web: Airducksac.com

Project Information

For:

DWC Construction Thornwood Lot 21, Fla

External static pressure Pressure losses Available static pressure Supply / return available pressure Lowest friction rate Actual air flow Total effective length (TEL)

Heating 0.50 in H2O 0 in H2O 0.50 in H2O 0.406 / 0.094 in H2O 0.097 in/100ft

0.50 in H2O 0 in H2O 0.50 in H2O 0.406 / 0.094 in H2O 0.097 in/100ft 1220 cfm

Cooling

515 ft

Supply Branch Detail Table

1220 cfm

Name		Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Master	h	3937	143	137	0.099	7.0	0x 0	VIFx	45.2	365.0	st3
Master bath	h	4005	145	89	0.097	6.0	0x 0	VIFX	48.4	370.0	st3
Master-A	h	3937	143	137	0.099	7.0	0x 0	VIFX	54.9	355.0	st3
Wic 1	h	927	34	18	0.105	4.0	0x 0	VIFx	51.0	335.0	st3
bath	С	1682	49	73	0.154	6.0	0x 0	VIFX	28.0	235.0	st2
bed 2	h	4573	166	94	0.201	7.0	0x 0	VIFX	31.8	170.0	st2
bed 3	h	2149	78	41	0.148	6.0	0x 0	VIFx	19.0	255.0	st2
kitchen/dining	C	3508	79	153	0.153	8.0	0x 0	VIFx	21.0	245.0	st2
laundry	h	1617	59	51	0.191	6.0	0x 0	VIFx	8.0	205.0	st1
living	C	4015	130	175	0.135	7.0	0x 0	VIFX	31.0	270.0	st3
living-A	c	4015	130	175	0.132	7.0	0x 0	VIFX	37.0	270.0	st3
wc	C	100	2	4	0.104	4.0	0x 0	VIFX	44.3	345.0	100000000000000000000000000000000000000
wic	c	1689	64	74	0.104	4.0	0x 0	VIFX	15.0	205.0	st3

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1	Peak AVF	1220	1220	0.097	732	15.7	8 x 30	RectFbg	
st3	Peak AVF	726	735	0.097	661	13.0	8 x 20	RectFbg	st1
st2	Peak AVF	371	361	0.148	668	9.3	8 x 10	RectFbg	st1

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x V (in)	V	Stud/Joist Opening (in)	Duct Matl	Trunk
rb3 rb4 rb2 rb1	0x 0 0x 0 0x 0 0x 0	200 313 257 449	165 187 401 467	70.2 90.0 74.8 97.0	0.134 0.105 0.126 0.097	573 898 287 595	8.0 8.0 16.0 12.0	0x 0x 0x 0x	0 0 0		VIFx VIFx VIFx VIFx	



Certificate of Product Ratings

AHRI Certified Reference Number: 201763659

Date: 12-07-2020

Model Status: Active

AHRI Type: HRCU-A-CB (Split System: Heat Pump with Remote Outdoor Unit-Air-Source)

Series: XR14

Outdoor Unit Brand Name: TRANE

Outdoor Unit Model Number (Condenser or Single Package): 4TWR4036G1

Indoor Unit Model Number (Evaporator and/or Air Handler): TEM4A0B36S31+TDR

The manufacturer of this TRANE product is responsible for the rating of this system combination.

Rated as follows in accordance with the latest edition of AHRI 210/240 with Addendum 1, Performance Rating of Unitary Air-Conditioning & Air-Source Heat Pump Equipment and subject to rating accuracy by AHRI-sponsored, independent, third party testing:

Cooling Capacity (A2) - Single or High Stage (95F), btuh: 35000

SEER: 14.00

EER (A2) - Single or High Stage (95F): 11.50

Heating Capacity (H12) - Single or High Stage (47F): 34400

HSPF (Region IV): 8.20

†"Active" Model Status are those that an AHRI Certification Program Participant is currently producing AND selling or offering for sale, CR new models that are being marketed but are not yet being produced."Production Stopped" Model Status are those that an AHRI Certification Program Participant is no longer producing BUT is still selling or offering for sale. Ratings that are accompanied by WAS indicate an involuntary re-rate. The new published rating is shown along with the previous (i.e. WAS) rating

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