

Project Information

For: Anyone, Heating and Cooling
Any, Anywhere, TX

Design Information

	Htg	Clg	Infiltration	Simplified
Outside db (°F)	34	96	Method	Tight
Inside db (°F)	68	78	Construction quality	0
Design TD (°F)	34	18	Fireplaces	
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	28	37		

HEATING EQUIPMENT

Make Lennox
Trade LENNOX
Model ML14KP1-024-230A**
AHRI ref 215710136

Efficiency 8.2 HSPF2

Heating input
Heating output 22400 Btuh @ 47°F
Temperature rise 26 °F
Actual air flow 800 cfm
Air flow factor 0.056 cfm/Btuh
Static pressure 0.60 in H2O
Space thermostat
Capacity balance point = 30 °F

Backup:
Input = 5 kW, Output = 17061 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Lennox
Trade LENNOX
Cond ML14KP1-024-230A**
Coil CBK47UHET-030-230-**
AHRI ref 215710136

Efficiency 13.2 EER2, 15.5 SEER2

Sensible cooling 16800 Btuh
Latent cooling 7200 Btuh
Total cooling 24000 Btuh
Actual air flow 800 cfm
Air flow factor 0.061 cfm/Btuh
Static pressure 0.60 in H2O
Load sensible heat ratio 0.71

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
BED 1	232	5084	3405	284	209
CLOSET	53	0	0	0	0
BED 2	139	1314	1907	73	117
BATH	20	496	146	28	9
DINING	196	3362	4084	188	250
KITCHEN	148	0	0	0	0
LIVING ROOM	94	3242	3261	181	200
BATH.	20	847	244	47	15

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

Entire House	903	14345	13047	800	800
Other equip loads		4210	2814		
Equip. @ 1.00 RSM			15861		
Latent cooling			6507		
TOTALS	903	18556	22368	800	800

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Notes: Cripple Brook Court, Houston, TX 77017

Design Information

Weather: Houston Bush, TX, US

Winter Design Conditions

Outside db 34 °F
Inside db 68 °F
Design TD 34 °F

Ventilation Method ASHRAE 62.2-2019

Heating Summary

Structure 11326 Btuh
Ducts (R-6.0) 3020 Btuh
Central vent (57 cfm) 2109 Btuh
Outside air
Humidification 2101 Btuh
Piping 0 Btuh
Equipment load 18556 Btuh

Infiltration

Method Simplified
Construction quality Tight
Fireplaces 0

	Heating	Cooling
Area (ft²)	903	903
Volume (ft³)	7224	7224
Air changes/hour	0.16	0.08
Equiv. AVF (cfm)	19	10

Heating Equipment Summary

Make Lennox
Trade LENNOX
Model ML14KP1-024-230A**
AHRI ref 215710136

Efficiency 8.2 HSPF2
Heating input
Heating output 22400 Btuh @ 47°F
Temperature rise 26 °F
Actual air flow 800 cfm
Air flow factor 0.056 cfm/Btuh
Static pressure 0.60 in H2O
Space thermostat
Capacity balance point = 30 °F

Backup:
Input = 5 kW, Output = 17061 Btuh, 100 AFUE

Summer Design Conditions

Outside db 96 °F
Inside db 78 °F
Design TD 18 °F
Daily range M
Relative humidity 50 %
Moisture difference 37 gr/lb

Sensible Cooling Equipment Load Sizing

Structure 8974 Btuh
Ducts (R-6.0) 4072 Btuh
Central vent (57 cfm) 1108 Btuh
Outside air
Blower 1706 Btuh
Use manufacturer's data y
Rate/swing multiplier 1.00
Equipment sensible load 15861 Btuh

Latent Cooling Equipment Load Sizing

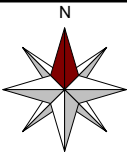
Structure 4245 Btuh
Ducts 812 Btuh
Central vent (57 cfm) 1450 Btuh
Outside air
Equipment latent load 6507 Btuh

Equipment Total Load (Sen+Lat) 22368 Btuh
Req. total capacity at 0.70 SHR 1.9 ton

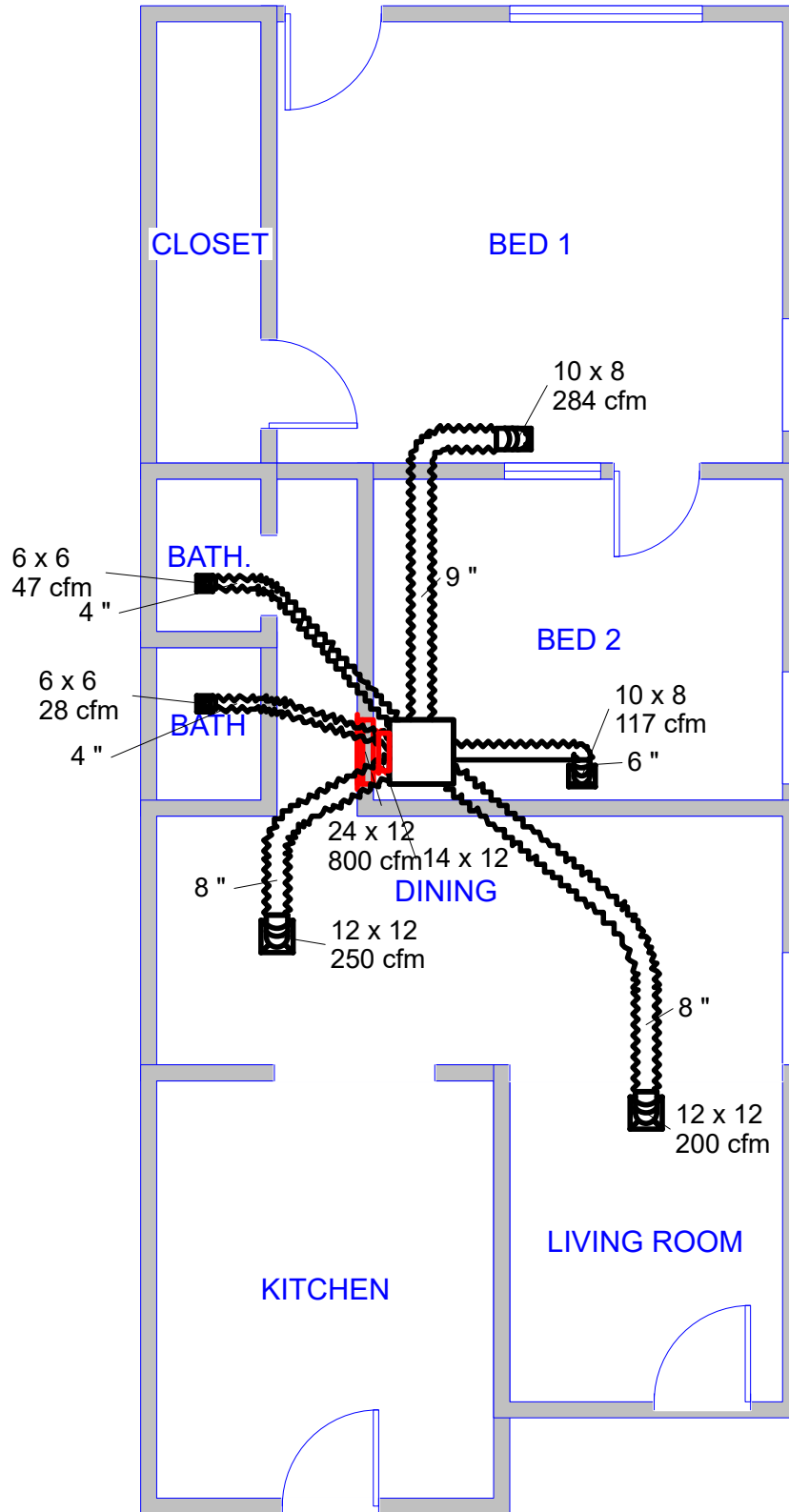
Cooling Equipment Summary

Make Lennox
Trade LENNOX
Cond ML14KP1-024-230A**
Coil CBK47UHET-030-230-**
AHRI ref 215710136
Efficiency 13.2 EER2, 15.5 SEER2
Sensible cooling 16800 Btuh
Latent cooling 7200 Btuh
Total cooling 24000 Btuh
Actual air flow 800 cfm
Air flow factor 0.061 cfm/Btuh
Static pressure 0.60 in H2O
Load sensible heat ratio 0.71

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



Level 1



Job #: Cripple Brook Court
Performed by Craig C Brooks for:

Anyone
Any
Anywhere, TX

WebREPS, LLC

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Duct System Summary

Entire House

WebREPS, LLC

Job: Cripple Brook Court
Date:
By: Craig C Brooks
Plan: Cripple Brook Court

1880 82nd Avenue Suite # 203, Vero Beach, FL 32966 Phone: 800-810-3280 Fax: 888-971-2999 Email: manualj@webrepsusa.com License: CAC054709

Project Information

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	Heating	Cooling
External static pressure	0.60 in H2O	0.60 in H2O
Pressure losses	0.23 in H2O	0.23 in H2O
Available static pressure	0.37 in H2O	0.37 in H2O
Supply / return available pressure	0.191 / 0.179 in H2O	0.191 / 0.179 in H2O
Lowest friction rate	0.295 in/100ft	0.295 in/100ft
Actual air flow	800 cfm	800 cfm
Total effective length (TEL)	125 ft	

Supply Branch Detail Table

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
BATH	h 496	28	9	0.335	4.0	0x0	VIFx	7.0	50.0	
BATH.	h 847	47	15	0.323	4.0	0x0	VIFx	9.1	50.0	
BED 1	h 5084	284	209	0.304	9.0	0x0	VIFx	12.8	50.0	
BED 2	c 1907	73	117	0.342	6.0	0x0	VIFx	5.8	50.0	
DINING	c 4084	188	250	0.326	8.0	0x0	VIFx	8.5	50.0	
LIVING ROOM	c 3261	181	200	0.295	8.0	0x0	VIFx	14.6	50.0	

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb1	0x0	800	800	60.8	0.295	686	11.7	12x 14		VIFx	