



Manual S Compliance Report

AHU 01

Manual J Express

Job:
Date: Feb 05, 2024
By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Cooling Equipment

Design Conditions

Outdoor design DB:	88.0°F	Sensible gain:	16290 Btuh	Entering coil DB:	75.0°F
Outdoor design WB:	73.0°F	Latent gain:	2803 Btuh	Entering coil WB:	62.5°F
Indoor design DB:	75.0°F	Total gain:	19092 Btuh		
Indoor RH:	50%	Estimated airflow:	1200 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split AC			
Manufacturer:	Rheem	Model:	RA1336AJ1NA+RCQD-3621AS+R95TA0701317MSA	
Actual airflow:	1200 cfm			
Sensible capacity:	29370 Btuh	180% of load		
Latent capacity:	4329 Btuh	154% of load		
Total capacity:	33700 Btuh	177% of load	SHR:	87%

Heating Equipment

Design Conditions

Outdoor design DB:	16.0°F	Heat loss:	17641 Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Gas furnace			
Manufacturer:	Rheem	Model:	R95TA0701317MSA	
Actual airflow:	1200 cfm			
Output capacity:	68000 Btuh	385% of load	Temp. rise:	50 °F

Meets all requirements of ACCA Manual S.



Manual S Compliance Report

AHU 02

Manual J Express

Job:
Date: Feb 05, 2024
By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Cooling Equipment

Design Conditions

Outdoor design DB:	88.0°F	Sensible gain:	11654	Btuh	Entering coil DB:	75.0°F
Outdoor design WB:	73.0°F	Latent gain:	1083	Btuh	Entering coil WB:	62.5°F
Indoor design DB:	75.0°F	Total gain:	12737	Btuh		
Indoor RH:	50%	Estimated airflow:	1200	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split AC			
Manufacturer:	Rheem	Model:	RA1336AJ1NA+RCQD-3621AS+R95TA0701317MSA	
Actual airflow:	1200	cfm		
Sensible capacity:	30260	Btuh	260%	of load
Latent capacity:	3440	Btuh	318%	of load
Total capacity:	33700	Btuh	265%	of load
			SHR:	90%

Heating Equipment

Design Conditions

Outdoor design DB:	16.0°F	Heat loss:	17090	Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Gas furnace			
Manufacturer:	Rheem	Model:	R95TA0701317MSA	
Actual airflow:	1200	cfm		
Output capacity:	68000	Btuh	398%	of load
			Temp. rise:	50 °F

Meets all requirements of ACCA Manual S.



Right-Suite® Universal 2023 23.0.04 RSU61951

Feb-05-2024 - Manual JDS.rup Calc = MJ8 Front Door faces: N

2024-Feb-05 15:05:12

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Manual S Compliance Report

AHU 03

Manual J Express

Job:
Date: Feb 05, 2024
By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Cooling Equipment

Design Conditions

Outdoor design DB:	88.0°F	Sensible gain:	6764 Btuh	Entering coil DB:	75.0°F
Outdoor design WB:	73.0°F	Latent gain:	917 Btuh	Entering coil WB:	62.5°F
Indoor design DB:	75.0°F	Total gain:	7681 Btuh		
Indoor RH:	50%	Estimated airflow:	800 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split AC				
Manufacturer:	Rheem	Model:	RA1324AJ1NB+RCFL-HU2617CU+R95TA0401317MSA		
Actual airflow:	800 cfm				
Sensible capacity:	20677 Btuh		306% of load		
Latent capacity:	2734 Btuh		298% of load		
Total capacity:	23411 Btuh		305% of load	SHR:	88%

Heating Equipment

Design Conditions

Outdoor design DB:	16.0°F	Heat loss:	12871 Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Gas furnace				
Manufacturer:	Rheem	Model:	R95TA0401317MSA		
Actual airflow:	800 cfm				
Output capacity:	41000 Btuh		319% of load	Temp. rise:	50 °F

Meets all requirements of ACCA Manual S.





Manual S Compliance Report

AHU 04

Manual J Express

Job:
Date: Feb 05, 2024
By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Cooling Equipment

Design Conditions

Outdoor design DB:	88.0°F	Sensible gain:	14146	Btuh	Entering coil DB:	75.3°F
Outdoor design WB:	73.0°F	Latent gain:	1801	Btuh	Entering coil WB:	62.8°F
Indoor design DB:	75.0°F	Total gain:	15947	Btuh		
Indoor RH:	50%	Estimated airflow:	1200	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split AC			
Manufacturer:	Rheem	Model:	RA1336AJ1NA+RCQD-3621AS+R95TA0701317MSA	
Actual airflow:	1200	cfm		
Sensible capacity:	35032	Btuh	248%	of load
Latent capacity:	5044	Btuh	280%	of load
Total capacity:	40076	Btuh	251%	of load SHR: 87%

Heating Equipment

Design Conditions

Outdoor design DB:	16.0°F	Heat loss:	20507	Btuh	Entering coil DB:	68.9°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Gas furnace			
Manufacturer:	Rheem	Model:	R95TA0701317MSA	
Actual airflow:	1200	cfm		
Output capacity:	68000	Btuh	332%	of load
			Temp. rise:	50 °F

Meets all requirements of ACCA Manual S.



Manual S Compliance Report

AHU 05

Manual J Express

Job:
Date: Feb 05, 2024
By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Cooling Equipment

Design Conditions

Outdoor design DB:	88.0°F	Sensible gain:	4405 Btuh	Entering coil DB:	75.0°F
Outdoor design WB:	73.0°F	Latent gain:	1834 Btuh	Entering coil WB:	62.5°F
Indoor design DB:	75.0°F	Total gain:	6238 Btuh		
Indoor RH:	50%	Estimated airflow:	800 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split AC			
Manufacturer:	Rheem	Model:	RA1324AJ1NB+RCFN-HM2417TC+R95TA0401317MSA	
Actual airflow:	800 cfm			
Sensible capacity:	20227 Btuh		459% of load	
Latent capacity:	3184 Btuh		174% of load	
Total capacity:	23411 Btuh		375% of load	SHR: 86%

Heating Equipment

Design Conditions

Outdoor design DB:	16.0°F	Heat loss:	19992 Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Gas furnace			
Manufacturer:	Rheem	Model:	R95TA0401317MSA	
Actual airflow:	800 cfm			
Output capacity:	41000 Btuh		205% of load	Temp. rise: 50 °F

Meets all requirements of ACCA Manual S.





Manual S Compliance Report

AHU 06

Manual J Express

Job:
Date: Feb 05, 2024
By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Cooling Equipment

Design Conditions

Outdoor design DB:	88.0°F	Sensible gain:	7907 Btuh	Entering coil DB:	75.0°F
Outdoor design WB:	73.0°F	Latent gain:	2448 Btuh	Entering coil WB:	62.5°F
Indoor design DB:	75.0°F	Total gain:	10355 Btuh		
Indoor RH:	50%	Estimated airflow:	800 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split AC				
Manufacturer:	Rheem	Model:	RA1324AJ1NB+RCFL-HU2617TU+R95TA0401317MSA		
Actual airflow:	800 cfm				
Sensible capacity:	19905 Btuh		252% of load		
Latent capacity:	3506 Btuh		143% of load		
Total capacity:	23411 Btuh		226% of load	SHR:	85%

Heating Equipment

Design Conditions

Outdoor design DB:	16.0°F	Heat loss:	18583 Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Gas furnace				
Manufacturer:	Rheem	Model:	R95TA0401317MSA		
Actual airflow:	800 cfm				
Output capacity:	41000 Btuh		221% of load	Temp. rise:	50 °F

Meets all requirements of ACCA Manual S.





Manual S Compliance Report

AHU 07

Manual J Express

Job:
Date: Feb 05, 2024
By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Cooling Equipment

Design Conditions

Outdoor design DB:	88.0°F	Sensible gain:	5579 Btuh	Entering coil DB:	75.0°F
Outdoor design WB:	73.0°F	Latent gain:	1308 Btuh	Entering coil WB:	62.5°F
Indoor design DB:	75.0°F	Total gain:	6887 Btuh		
Indoor RH:	50%	Estimated airflow:	800 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split AC				
Manufacturer:	Rheem	Model:	RA1324AJ1NB+RCFL-HU2617CU+R95TA0401317MSA		
Actual airflow:	800 cfm				
Sensible capacity:	20475 Btuh		367% of load		
Latent capacity:	2936 Btuh		224% of load		
Total capacity:	23411 Btuh		340% of load	SHR:	87%

Heating Equipment

Design Conditions

Outdoor design DB:	16.0°F	Heat loss:	18357 Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Gas furnace				
Manufacturer:	Rheem	Model:	R95TA0401317MSA		
Actual airflow:	800 cfm				
Output capacity:	41000 Btuh		223% of load	Temp. rise:	50 °F

Meets all requirements of ACCA Manual S.





Manual S Compliance Report

Mini Split

Manual J Express

Job:
Date: Feb 05, 2024
By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Cooling Equipment

Design Conditions

Outdoor design DB:	88.0°F	Sensible gain:	588 Btuh	Entering coil DB:	0°F
Outdoor design WB:	73.0°F	Latent gain:	332 Btuh	Entering coil WB:	-3.1°F
Indoor design DB:	75.0°F	Total gain:	920 Btuh		
Indoor RH:	50%	Estimated airflow:	400 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Fujitsu	Model:	AOUH12LUAS1+ACUH12LUAS1		
Actual airflow:	400 cfm				
Sensible capacity:	8400 Btuh	1429% of load			
Latent capacity:	3600 Btuh	1083% of load			
Total capacity:	12000 Btuh	1304% of load	SHR:	70%	

Heating Equipment

Design Conditions

Outdoor design DB:	16.0°F	Heat loss:	5728 Btuh	Entering coil DB:	0°F
Indoor design DB:	70.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Fujitsu	Model:	AOUH12LUAS1+ACUH12LUAS1		
Actual airflow:	400 cfm				
Output capacity:	16000 Btuh	279% of load		Capacity balance:	-7 °F
Supplemental heat required:	0 Btuh			Economic balance:	-99 °F

Meets all requirements of ACCA Manual S.



Right-Suite® Universal 2023 23.0.04 RSU61951

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Feb-05-2024 - Manual JDS.rup Calc = MJ8 Front Door faces: N

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DHW Report
AHU 01
Manual J Express

Job:
 Date: Feb 05, 2024
 By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Design Criteria

Occupants		Not occupied during the day	
Age	Number		
0-5	0	Dishwasher	
6-13	2	Clothes washer	
14-59	2	Additional use (gpd)	0
60+	0	Setpoint (°F)	120
		Daily use (gpd)	61

Gas conventional (40 gal, 0.60 EF)

Manufacturer	Tank size (gal)	40
Trade name	Energy factor	0.60
Model	Input (MBtuh)	0.0
AHRI ref. number	1st hour (gal)	60
	Recovery eff. (%)	77





DHW Report
AHU 02
Manual J Express

Job:
 Date: Feb 05, 2024
 By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Design Criteria

Occupants		Not occupied during the day	
Age	Number		
0-5	0	Dishwasher	
6-13	2	Clothes washer	
14-59	2	Additional use (gpd)	0
60+	0	Setpoint (°F)	120
		Daily use (gpd)	61

Gas conventional (40 gal, 0.60 EF)

Manufacturer	Tank size (gal)	40
Trade name	Energy factor	0.60
Model	Input (MBtuh)	0.0
AHRI ref. number	1st hour (gal)	60
	Recovery eff. (%)	77





DHW Report
AHU 03
Manual J Express

Job:
 Date: Feb 05, 2024
 By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Design Criteria

Occupants		Not occupied during the day	
Age	Number		
0-5	0	Dishwasher	
6-13	2	Clothes washer	
14-59	2	Additional use (gpd)	0
60+	0	Setpoint (°F)	120
		Daily use (gpd)	61

Gas conventional (40 gal, 0.60 EF)

Manufacturer	Tank size (gal)	40
Trade name	Energy factor	0.60
Model	Input (MBtuh)	0.0
AHRI ref. number	1st hour (gal)	60
	Recovery eff. (%)	77





DHW Report
AHU 05
Manual J Express

Job:
 Date: Feb 05, 2024
 By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Design Criteria

Occupants		Not occupied during the day	
Age	Number		
0-5	0	Dishwasher	
6-13	2	Clothes washer	
14-59	2	Additional use (gpd)	0
60+	0	Setpoint (°F)	120
		Daily use (gpd)	61

Gas conventional (40 gal, 0.60 EF)

Manufacturer	Tank size (gal)	40
Trade name	Energy factor	0.60
Model	Input (MBtuh)	0.0
AHRI ref. number	1st hour (gal)	60
	Recovery eff. (%)	77





DHW Report
AHU 06
Manual J Express

Job:
 Date: Feb 05, 2024
 By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Design Criteria

Occupants		Not occupied during the day	
Age	Number		
0-5	0	Dishwasher	
6-13	2	Clothes washer	
14-59	2	Additional use (gpd)	0
60+	0	Setpoint (°F)	120
		Daily use (gpd)	61

Gas conventional (40 gal, 0.60 EF)

Manufacturer	Tank size (gal)	40
Trade name	Energy factor	0.60
Model	Input (MBtuh)	0.0
AHRI ref. number	1st hour (gal)	60
	Recovery eff. (%)	77





DHW Report
AHU 07
Manual J Express

Job:
 Date: Feb 05, 2024
 By:

2 Grant Ave, Lakewood, NJ 08701 Phone: 732-731-9836 Email: manualjexpress@gmail.com

Project Information

For: Manual J Express

Design Criteria

Occupants		Not occupied during the day	
Age	Number		
0-5	0	Dishwasher	
6-13	2	Clothes washer	
14-59	2	Additional use (gpd)	0
60+	0	Setpoint (°F)	120
		Daily use (gpd)	61

Gas conventional (40 gal, 0.60 EF)

Manufacturer	Tank size (gal)	40
Trade name	Energy factor	0.60
Model	Input (MBtuh)	0.0
AHRI ref. number	1st hour (gal)	60
	Recovery eff. (%)	77





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

Form
RPER 1
15 Mar 09

Header Information

Contractor: Manual J Express	REQUIRED ATTACHMENTS	ATTACHED
Mechanical license:	Manual J1 Form (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Building plan #:	or MJ1AE Form* (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Home address (Street or Lot#, Block, Subdivision):	OEM performance data (heating, cooling, blower):	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Manual D Friction Rate Worksheet:	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Duct distribution sketch:	Yes <input type="checkbox"/> No <input type="checkbox"/>
	BLOCK: 251.02 LOT: 85.17, AHU 01	

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature: 16 °F
 Indoor temperature: 70 °F
 Total heat loss: 17641 Btuh

Summer Design Conditions

Outdoor temperature: 88 °F
 Indoor temperature: 75 °F
 Grains difference: 34 gr/lb @ 50% RH
 Sensible heat gain: 17516 Btuh
 Latent heat gain: 3014 Btuh
 Total heat gain: 20530 Btuh

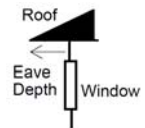
Building Construction Information

Building

Orientation: Front Door faces North
North, East, West, South, Northeast, Northwest, Southeast, Southwest
 Number of bedrooms: 0
 Conditioned floor area: 1551 ft²
 Number of occupants: 9

Windows

Eave overhang depth: 1.4 ft
 Internal shade: blinds
Blinds, drapes, etc.
 Number of skylights: 0



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Gas furnace
Furnace, Heat pump, Boiler, etc.
 Model: Rheem
 R95TA0701317MSA
 Heating output capacity: 68000 Btuh
Heat pumps - capacity at winter design outdoor conditions
 Aux. heating output capacity: 0 Btuh

Cooling Equipment Data

Equipment type: Split AC
Air Conditioner, Heat pump, etc.
 Model: Rheem
 RA1336AJ1NA
 Total cooling capacity: 33700 Btuh
 Sensible cooling capacity: 29370 Btuh
 Latent cooling capacity: 4329 Btuh

Blower Data

Heating cfm: 1200
 Cooling cfm: 1200
 Static pressure: 0.65 in H₂O
Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow: 1200 cfm	Longest supply duct: 351 ft	Duct Materials Used
Equipment design ESP: 0.65 in H ₂ O	Longest return duct: 162 ft	Trunk duct: Sheet metal
Total device pressure losses: -0.3 in H ₂ O	Total effective length (TEL): 512 ft	Branch duct: Sheet metal
Available static pressure (ASP): 0.34 in H₂O	Friction rate: 0.066 in/100ft	

Friction Rate = ASP ÷ (TEL x 100)

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____

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

*Home qualifies for MJ1AE Form based on Abridged Edition Checklist



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

Form
RPER 1
15 Mar 09

Header Information

Contractor: Manual J Express	REQUIRED ATTACHMENTS	ATTACHED
Mechanical license:	Manual J1 Form (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Building plan #:	or MJ1AE Form* (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Home address (Street or Lot#, Block, Subdivision):	OEM performance data (heating, cooling, blower):	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Manual D Friction Rate Worksheet:	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Duct distribution sketch:	Yes <input type="checkbox"/> No <input type="checkbox"/>
	BLOCK: 251.02 LOT: 85.17, AHU 02	

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature: 16 °F
 Indoor temperature: 70 °F
 Total heat loss: 17090 Btuh

Summer Design Conditions

Outdoor temperature: 88 °F
 Indoor temperature: 75 °F
 Grains difference: 34 gr/lb @ 50% RH
 Sensible heat gain: 12531 Btuh
 Latent heat gain: 1165 Btuh
 Total heat gain: 13695 Btuh

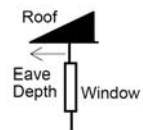
Building Construction Information

Building

Orientation: Front Door faces North
North, East, West, South, Northeast, Northwest, Southeast, Southwest
 Number of bedrooms: 0
 Conditioned floor area: 1120 ft²
 Number of occupants: 0

Windows

Eave overhang depth: 1.4 ft
 Internal shade: blinds
Blinds, drapes, etc.
 Number of skylights: 0



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Gas furnace
Furnace, Heat pump, Boiler, etc.
 Model: Rheem
 R95TA0701317MSA
 Heating output capacity: 68000 Btuh
Heat pumps - capacity at winter design outdoor conditions
 Aux. heating output capacity: 0 Btuh

Cooling Equipment Data

Equipment type: Split AC
Air Conditioner, Heat pump, etc.
 Model: Rheem
 RA1336AJ1NA
 Total cooling capacity: 33700 Btuh
 Sensible cooling capacity: 30260 Btuh
 Latent cooling capacity: 3440 Btuh

Blower Data

Heating cfm: 1200
 Cooling cfm: 1200
 Static pressure: 0.80 in H₂O
Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow: 1200 cfm	Longest supply duct: 401 ft	Duct Materials Used
Equipment design ESP: 0.80 in H ₂ O	Longest return duct: 264 ft	Trunk duct: Sheet metal
Total device pressure losses: -0.3 in H ₂ O	Total effective length (TEL): 665 ft	Branch duct: Sheet metal
Available static pressure (ASP): 0.49 in H₂O	Friction rate: 0.074 in/100ft	

Friction Rate = ASP ÷ (TEL x 100)

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____
 Contractor's signature: _____ Date: _____

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

*Home qualifies for MJ1AE Form based on Abridged Edition Checklist



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

Form
RPER 1
15 Mar 09

Header Information

Contractor: Manual J Express	REQUIRED ATTACHMENTS	ATTACHED
Mechanical license:	Manual J1 Form (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Building plan #:	or MJ1AE Form* (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Home address (Street or Lot#, Block, Subdivision):	OEM performance data (heating, cooling, blower):	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Manual D Friction Rate Worksheet:	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Duct distribution sketch:	Yes <input type="checkbox"/> No <input type="checkbox"/>
	BLOCK: 251.02 LOT: 85.17, AHU 03	

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature: 16 °F
 Indoor temperature: 70 °F
 Total heat loss: 12871 Btuh

Summer Design Conditions

Outdoor temperature: 88 °F
 Indoor temperature: 75 °F
 Grains difference: 34 gr/lb @ 50% RH
 Sensible heat gain: 7273 Btuh
 Latent heat gain: 986 Btuh
 Total heat gain: 8259 Btuh

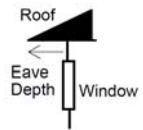
Building Construction Information

Building

Orientation: Front Door faces North
North, East, West, South, Northeast, Northwest, Southeast, Southwest
 Number of bedrooms: 1
 Conditioned floor area: 820 ft²
 Number of occupants: 0

Windows

Eave overhang depth: 1.4 ft
 Internal shade: blinds
Blinds, drapes, etc.
 Number of skylights: 0



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Gas furnace
Furnace, Heat pump, Boiler, etc.
 Model: Rheem
 R95TA0401317MSA
 Heating output capacity: 41000 Btuh
Heat pumps - capacity at winter design outdoor conditions
 Aux. heating output capacity: 0 Btuh

Cooling Equipment Data

Equipment type: Split AC
Air Conditioner, Heat pump, etc.
 Model: Rheem
 RA1324AJ1NB
 Total cooling capacity: 23411 Btuh
 Sensible cooling capacity: 20677 Btuh
 Latent cooling capacity: 2734 Btuh

Blower Data

Heating cfm: 800
 Cooling cfm: 800
 Static pressure: 0.55 in H₂O
Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow: 800 cfm	Longest supply duct: 233 ft	Duct Materials Used
Equipment design ESP: 0.55 in H ₂ O	Longest return duct: 117 ft	Trunk duct: Sheet metal
Total device pressure losses: -0.3 in H ₂ O	Total effective length (TEL): 350 ft	Branch duct: Sheet metal
Available static pressure (ASP): 0.24 in H₂O	Friction rate: 0.069 in/100ft	

Friction Rate = ASP ÷ (TEL x 100)

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____

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

*Home qualifies for MJ1AE Form based on Abridged Edition Checklist



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

Form
RPER 1
15 Mar 09

Header Information

Contractor: Manual J Express	REQUIRED ATTACHMENTS	ATTACHED
Mechanical license:	Manual J1 Form (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Building plan #:	or MJ1AE Form* (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Home address (Street or Lot#, Block, Subdivision):	OEM performance data (heating, cooling, blower):	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Manual D Friction Rate Worksheet:	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Duct distribution sketch:	Yes <input type="checkbox"/> No <input type="checkbox"/>
	BLOCK: 251.02 LOT: 85.17, AHU 04	

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature: 16 °F
 Indoor temperature: 70 °F
 Total heat loss: 20507 Btuh

Summer Design Conditions

Outdoor temperature: 88 °F
 Indoor temperature: 75 °F
 Grains difference: 34 gr/lb @ 50% RH
 Sensible heat gain: 15211 Btuh
 Latent heat gain: 1937 Btuh
 Total heat gain: 17147 Btuh

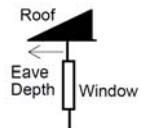
Building Construction Information

Building

Orientation: Front Door faces North
North, East, West, South, Northeast, Northwest, Southeast, Southwest
 Number of bedrooms: 4
 Conditioned floor area: 1500 ft²
 Number of occupants: 0

Windows

Eave overhang depth: 1.4 ft
 Internal shade: blinds
Blinds, drapes, etc.
 Number of skylights: 0



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Gas furnace
Furnace, Heat pump, Boiler, etc.
 Model: Rheem
 R95TA0701317MSA
 Heating output capacity: 68000 Btuh
Heat pumps - capacity at winter design outdoor conditions
 Aux. heating output capacity: 0 Btuh

Cooling Equipment Data

Equipment type: Split AC
Air Conditioner, Heat pump, etc.
 Model: Rheem
 RA1336AJ1NA
 Total cooling capacity: 40076 Btuh
 Sensible cooling capacity: 35032 Btuh
 Latent cooling capacity: 5044 Btuh

Blower Data

Heating cfm: 1200
 Cooling cfm: 1200
 Static pressure: 0.60 in H₂O
Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow: 1200 cfm	Longest supply duct: 207 ft	Duct Materials Used
Equipment design ESP: 0.60 in H ₂ O	Longest return duct: 213 ft	Trunk duct: Sheet metal
Total device pressure losses: -0.3 in H ₂ O	Total effective length (TEL): 420 ft	Branch duct: Sheet metal
Available static pressure (ASP): 0.29 in H₂O	Friction rate: 0.069 in/100ft	

Friction Rate = ASP ÷ (TEL x 100)

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____

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

Form
RPER 1
15 Mar 09

Header Information

Contractor: Manual J Express	REQUIRED ATTACHMENTS	ATTACHED
Mechanical license:	Manual J1 Form (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Building plan #:	or MJ1AE Form* (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Home address (Street or Lot#, Block, Subdivision):	OEM performance data (heating, cooling, blower):	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Manual D Friction Rate Worksheet:	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Duct distribution sketch:	Yes <input type="checkbox"/> No <input type="checkbox"/>
	BLOCK: 251.02 LOT: 85.17, AHU 05	

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature: 16 °F
 Indoor temperature: 70 °F
 Total heat loss: 19992 Btuh

Summer Design Conditions

Outdoor temperature: 88 °F
 Indoor temperature: 75 °F
 Grains difference: 34 gr/lb @ 50% RH
 Sensible heat gain: 4736 Btuh
 Latent heat gain: 1972 Btuh
 Total heat gain: 6708 Btuh

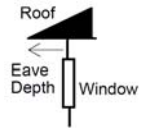
Building Construction Information

Building

Orientation: Front Door faces North
North, East, West, South, Northeast, Northwest, Southeast, Southwest
 Number of bedrooms: 2
 Conditioned floor area: 1080 ft²
 Number of occupants: 0

Windows

Eave overhang depth: 1.4 ft
 Internal shade: blinds
Blinds, drapes, etc.
 Number of skylights: 0



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Gas furnace
Furnace, Heat pump, Boiler, etc.
 Model: Rheem
 R95TA0401317MSA
 Heating output capacity: 41000 Btuh
Heat pumps - capacity at winter design outdoor conditions
 Aux. heating output capacity: 0 Btuh

Cooling Equipment Data

Equipment type: Split AC
Air Conditioner, Heat pump, etc.
 Model: Rheem
 RA1324AJ1NB
 Total cooling capacity: 23411 Btuh
 Sensible cooling capacity: 20227 Btuh
 Latent cooling capacity: 3184 Btuh

Blower Data

Heating cfm: 800
 Cooling cfm: 800
 Static pressure: 0.60 in H₂O
Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow: 800 cfm	Longest supply duct: 349 ft	Duct Materials Used
Equipment design ESP: 0.60 in H ₂ O	Longest return duct: 167 ft	Trunk duct: Sheet metal
Total device pressure losses: -0.3 in H ₂ O	Total effective length (TEL): 516 ft	Branch duct: Sheet metal
Available static pressure (ASP): 0.29 in H₂O	Friction rate: 0.056 in/100ft	

Friction Rate = ASP ÷ (TEL x 100)

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____

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

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

Form
RPER 1
15 Mar 09

Header Information

Contractor: Manual J Express	REQUIRED ATTACHMENTS	ATTACHED
Mechanical license:	Manual J1 Form (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Building plan #:	or MJ1AE Form* (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Home address (Street or Lot#, Block, Subdivision):	OEM performance data (heating, cooling, blower):	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Manual D Friction Rate Worksheet:	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Duct distribution sketch:	Yes <input type="checkbox"/> No <input type="checkbox"/>
	BLOCK: 251.02 LOT: 85.17, AHU 06	

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature: 16 °F
 Indoor temperature: 70 °F
 Total heat loss: 18583 Btuh

Summer Design Conditions

Outdoor temperature: 88 °F
 Indoor temperature: 75 °F
 Grains difference: 34 gr/lb @ 50% RH
 Sensible heat gain: 8502 Btuh
 Latent heat gain: 2632 Btuh
 Total heat gain: 11134 Btuh

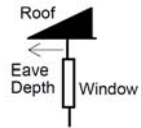
Building Construction Information

Building

Orientation: Front Door faces North
North, East, West, South, Northeast, Northwest, Southeast, Southwest
 Number of bedrooms: 3
 Conditioned floor area: 1367 ft²
 Number of occupants: 5

Windows

Eave overhang depth: 0 ft
 Internal shade: blinds
Blinds, drapes, etc.
 Number of skylights: 0



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Gas furnace
Furnace, Heat pump, Boiler, etc.
 Model: Rheem
 R95TA0401317MSA
 Heating output capacity: 41000 Btuh
Heat pumps - capacity at winter design outdoor conditions
 Aux. heating output capacity: 0 Btuh

Cooling Equipment Data

Equipment type: Split AC
Air Conditioner, Heat pump, etc.
 Model: Rheem
 RA1324AJ1NB
 Total cooling capacity: 23411 Btuh
 Sensible cooling capacity: 19905 Btuh
 Latent cooling capacity: 3506 Btuh

Blower Data

Heating cfm: 800
 Cooling cfm: 800
 Static pressure: 0.60 in H₂O
Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow: 800 cfm	Longest supply duct: 279 ft	Duct Materials Used
Equipment design ESP: 0.60 in H ₂ O	Longest return duct: 187 ft	Trunk duct: Sheet metal
Total device pressure losses: -0.3 in H ₂ O	Total effective length (TEL): 466 ft	Branch duct: Sheet metal
Available static pressure (ASP): 0.29 in H₂O	Friction rate: 0.062 in/100ft	

Friction Rate = ASP ÷ (TEL x 100)

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____

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

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

Form
RPER 1
15 Mar 09

Header Information

Contractor:	Manual J Express	REQUIRED ATTACHMENTS	ATTACHED
Mechanical license:		Manual J1 Form (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Building plan #:		or MJ1AE Form* (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Home address (Street or Lot#, Block, Subdivision):		OEM performance data (heating, cooling, blower):	Yes <input type="checkbox"/> No <input type="checkbox"/>
		Manual D Friction Rate Worksheet:	Yes <input type="checkbox"/> No <input type="checkbox"/>
		Duct distribution sketch:	Yes <input type="checkbox"/> No <input type="checkbox"/>
		BLOCK: 251.02 LOT: 85.17, AHU 07	

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

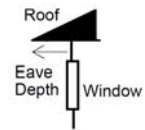
Winter Design Conditions
 Outdoor temperature: 16 °F
 Indoor temperature: 70 °F
 Total heat loss: 18357 Btuh

Summer Design Conditions
 Outdoor temperature: 88 °F
 Indoor temperature: 75 °F
 Grains difference: 34 gr/lb @ 50% RH
 Sensible heat gain: 5999 Btuh
 Latent heat gain: 1407 Btuh
 Total heat gain: 7405 Btuh

Building Construction Information

Building
 Orientation: Front Door faces North
North, East, West, South, Northeast, Northwest, Southeast, Southwest
 Number of bedrooms: 1
 Conditioned floor area: 1507 ft²
 Number of occupants: 0

Windows
 Eave overhang depth: 0 ft
 Internal shade: blinds
Blinds, drapes, etc.
 Number of skylights: 0



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Gas furnace
Furnace, Heat pump, Boiler, etc.
 Model: Rheem
 R95TA0401317MSA
 Heating output capacity: 41000 Btuh
Heat pumps - capacity at winter design outdoor conditions
 Aux. heating output capacity: 0 Btuh

Cooling Equipment Data

Equipment type: Split AC
Air Conditioner, Heat pump, etc.
 Model: Rheem
 RA1324AJ1NB
 Total cooling capacity: 23411 Btuh
 Sensible cooling capacity: 20475 Btuh
 Latent cooling capacity: 2936 Btuh

Blower Data

Heating cfm: 800
 Cooling cfm: 800
 Static pressure: 0.70 in H₂O
Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow:	800 cfm	Longest supply duct:	410 ft	Duct Materials Used	
Equipment design ESP:	0.70 in H ₂ O	Longest return duct:	173 ft	Trunk duct:	Sheet metal
Total device pressure losses:	-0.3 in H ₂ O	Total effective length (TEL):	583 ft	Branch duct:	Sheet metal
Available static pressure (ASP):	0.39 in H₂O	Friction rate:	0.067 in/100ft		

Friction Rate = ASP ÷ (TEL x 100)

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____

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

Form
RPER 1
15 Mar 09

Header Information

Contractor: **Manual J Express**

Mechanical license:

Building plan #:

Home address (Street or Lot#, Block, Subdivision):

REQUIRED ATTACHMENTS

Manual J1 Form (and supporting worksheets):
or MJ1AE Form* (and supporting worksheets):
OEM performance data (heating, cooling, blower):
Manual D Friction Rate Worksheet:
Duct distribution sketch:

BLOCK: 251.02 LOT: 85.17, Mini Split

ATTACHED

Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Yes	<input type="checkbox"/>	No	<input type="checkbox"/>
Yes	<input type="checkbox"/>	No	<input type="checkbox"/>

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature: 16 °F
Indoor temperature: 70 °F
Total heat loss: 5728 Btuh

Summer Design Conditions

Outdoor temperature: 88 °F
Indoor temperature: 75 °F
Grains difference: 34 gr/lb @ 50% RH
Sensible heat gain: 632 Btuh
Latent heat gain: 357 Btuh
Total heat gain: 990 Btuh

Building Construction Information

Building

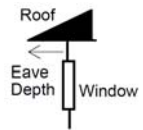
Orientation: **Front Door faces North**
North, East, West, South, Northeast, Northwest, Southeast, Southwest

Number of bedrooms: 1
Conditioned floor area: 281 ft²
Number of occupants: 0

Windows

Eave overhang depth: 0 ft
Internal shade: blinds
Blinds, drapes, etc.

Number of skylights: 0



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Split ASHP
Furnace, Heat pump, Boiler, etc.

Model: Fujitsu
AOUH12LUAS1+ACUH12LUAS1

Heating output capacity: 0 Btuh
Heat pumps - capacity at winter design outdoor conditions

Aux. heating output capacity: 0 Btuh

Cooling Equipment Data

Equipment type: Split ASHP
Air Conditioner, Heat pump, etc.

Model: Fujitsu
AOUH12LUAS1+ACUH12LUAS1

Total cooling capacity: 0 Btuh
Sensible cooling capacity: 0 Btuh
Latent cooling capacity: 0 Btuh

Blower Data

Heating cfm: 400
Cooling cfm: 400
Static pressure: 0 in H₂O
Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow:	400 cfm	Longest supply duct:	0 ft	Duct Materials Used
Equipment design ESP:	0 in H ₂ O	Longest return duct:	0 ft	Trunk duct:
Total device pressure losses:	0 in H ₂ O	Total effective length (TEL):	0 ft	
Available static pressure (ASP):	0 in H ₂ O	Friction rate:	0 in/100ft	Branch duct:

Friction Rate = ASP ÷ (TEL x 100)

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____

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

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