

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

Form RPER 1 15 Mar 09

## Header Information

| Header Information  |  |  |  |  |  |
|---|--|--|--|--|--|
| Contractor:company name<br>your nameMechanical license:**must have lic.<br>type and #**Building plan #:Home address (Street or Lot#, Block, Subdivision):   | REQUIRED ATTACHMENTS   ATTACHED     Manual J1 Fom (and supporting worksheets):   Yes   No     or MJ1AE Form* (and supporting worksheets):   Yes   No     OEM performance data (heating, cooling, blower):   Yes   No     Manual D Friction Rate Worksheet:   Yes   No     Duct distribution sketch:   Yes   No     123 main st, 2nd fl   I   I   |  |  |  |  |
| HVAC LOAD CALCULATION (IRC M1401.3)   |  |  |  |  |  |
| Design Conditions pls check which w   | vay Building Construction Information  |  |  |  |  |
| Winter Design Conditio<br>Outdoor temperature:front door facesOutdoor temperature:70Indoor temperature:70Total heat loss:22886Summer Design Conditions22886Outdoor temperature:83Indoor temperature:75Grains difference:25gr/lb @ 50%Sensible heat gain:10997Latent heat gain:12702 | Building<br>Orientation:<br>North, East, West, South, Northreast, Northwest, Southwest,<br>Btuh Front Door faces Southwest<br>Southwest, Southwest additional 2 person<br>total of 4   Btuh Number of bedrooms:<br>Conditioned floor area:<br>Number of occupants: 9 total of 4   °F Windows 2   °F Windows 0   RH Eave overhang depth:<br>Internet shade: 0   Btuh Number of skylights: 0 |  |  |  |  |
| HVAC EQUIPMENT SELECTION (IRC M   | (1401.3)   |  |  |  |  |
| Heating Equipment Data  | Cooling Equipment Data Blower Data   |  |  |  |  |
| Equipment type:   Gas fumace     Furnace, Heat pump, Boller, etc.   Model:     Model:   American Standard     ADD2A040A9242A*   Heating output capacity:     Heat pumps - capacity at winter design outdoor conditions   Bluh     Aux. heating output capacity:   0   Btuh          | Equipment type:   Split AC   Heating cfm:   470     Air conditioner, Heat pump, etc.   Cooling cfm:   470     Model:   American Standard   437A3018H1     Total cooling capacity:   0   Btuh     Sensible cooling capacity:   0   Btuh     Latent cooling capacity:   0   Btuh   |  |  |  |  |
| HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)  |  |  |  |  |  |
| Design airflow:470 cfmEquipment design ESP:0.70 in H2OTotal device pressure losses:-0.3 in H2OAvailable static pressure (ASP):0.36 in H2O   | Longest supply duct:   329   ft   Duct Materials Used     Longest retum duct:   267   ft   Trunk duct:   Sheet metal     Total effective length (TEL):   596   ft   Friction rate:   0,060   in/100ft   Branch duct:   Round flex vinyl     Friction Rate = ASP + (TELx 100)   in/100ft   Branch duct:   Round flex vinyl  |  |  |  |  |
| I declare the load calculation, equipment, equipment s<br>understand the claims made on these forms will be su  | election and duct design were rigorously performed based on the building plan listed above. I<br>bject to review and verification.   |  |  |  |  |
| Contractor's printed name:  |  |  |  |  |  |
| Contractor's signature:   | Date:  |  |  |  |  |
| Reserved for County, Town Municipality or Authority ha<br>*Home qualifies for MJ1AE Form based on Abridged Editor   | 이 것이 같은 것 같아요. 이 것 같아요. 이 같은 것 같아요. 이 것 같아요. 이 것 같아요. 것 같아요. 이 것 같아요. 이 것 같아요. 같이 가 같아요. 같이 가 같아요. 이 것 같아요. 이 것  |  |  |  |  |



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|--|---|---|---|----------------------|
| Contractor:  | company name  | Manual II F   | REQUIRED ATTACHMENTS<br>orm (and supporting worksheets):                    |                      |
| Mechanical license:  | your name<br>**must have lic.   | or MJ1AE Fo   | orm (and supporting worksheets):<br>nance data (heating, cooling, blower):  | Yes No 1<br>Yes No 1 |
| Building plan #:   | type and #**  |   | iction Rate Worksheet:  | Yes No Yes No No No  |
| Home address (Street   | or Lot#, Block, Subdivision):   | 123 main st, 1stfl  | lion skelch.  |                      |
| HVAC LOAD CA   | ALCULATION (IRC M140  | 01.3)   |   |                      |
| Design Condition   | <u>15</u>   | Building Constru  | iction Information  |                      |
| Winter Design Cor<br>Outdoor temperature<br>Indoor temperature | re: 7   | P °F Building<br>off Orientation:<br>North, East, West, South             | Front Door faces Southwest<br>1, Northeast, Northwest, Southeast, Southwest | total number of      |
| Total heat loss:<br>Summer Design C                            | 20145   | 5 Bluh Number of bedroo<br>Conditioned floor a<br>Number of occupa        | area: 1008 ft   | ccupant 1 mo         |
| Outdoor temperature  | re: 83  |   | , U   | Roof                 |
| Grains difference:<br>Sensible heat gain                       | 25 gr/lb @ 50%  |   | pth: 0 ft   | ← <u>I</u>           |
| Latent heat gain:  | 1880  | ) Bluh Blinds, drapes, etc.   |   | Eave<br>Depth Window |
| Total heat gain:   | 12100   | Btuh Number of skylight   | us. 0   | 1                    |
| HVAC EQUIPM  | ENT SELECTION (IRC  | M1401.3)  |   |                      |
| Heating Equipme  | ent Data  | Cooling Equipment Data  | Blower Data   |                      |
| Equipment type:<br>Furnace, Heat pump, Bo                      | Gas fumace  | e Equipment type:<br>Air Conditioner, Heat pump, etc.                     | Split AC Heating cfm:<br>Cooling cfm:                                       | 473<br>473           |
| Model:   | American Standard   |   | American Standard Static pressure<br>Fan's rated extern                     |                      |
| Heating output cap   | ADH1B040A9H21B<br>bacity: 38000 Btuh<br>at winter design outdoor conditions | Total cooling capacity:   | 0 Btuh  |                      |
| Aux, heating output  |   | Sensible cooling capacity:<br>Latent cooling capacity:                    | 0 Btuh 2  |                      |
|  |   |   |   | only be 0 if         |
| HVAC DUCT D  | STRIBUTION SYSTEM   | DESIGN (IRC M1601.1)  | under 1   | 8K DIU               |
| Design airflow:  | 473 cfm   | Longest supply duct: 22   |   | (                    |
| Equipment design Es<br>Total device pressure                   | SP: 0.70 in H2O<br>losses: -0.4 m H2O                                       | Longest return duct: 29<br>Total effective length (TEL/): 22              | 6 ft Trunk duct:  | Sheet metal          |
| Available static pres  |   | Friction rate: 0,06   | 5 in/100ft Branch duct:   | Round flex vinyl     |
| st have values   | -u  | below .ou fails   | Hate sure in tiex is  | /00000               |
| I declare the load ca<br>understand the clain                  | Iculation, equipment, equipment<br>ns made on these forms will be           | selection and duct design were rigoro subject to review and verification. |   | listed above. I      |
| Contractor's printed   |   |   | ~   |                      |
| Contractor's signatu   | ire: 🗲 mi   | ust be signed   | . Date:   |                      |
|  | (mar)   | m   | u)  |                      |
| Reserved for Count   | y, Town Municipality or Authority   | having jurisdiction use.  |   |                      |

\*Home qualifies for MJ1AE Form based on Abridged Edition Checklist

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