


FORM J1_{AE} • ABRIDGED VERSION of MANUAL J, 8TH EDITION

| | | | | | | |
|---------------------------------|---------------------|----------------------------------|------|--------------------|--------|--|
| Project | Multi- Split Sizing | Design State & City | Ohio | Toledo AP | |  |
| Indoor Design Heating db | 70 | @ Outdoor (Winter) 99% db | 3 | HTD | 67 | |
| Indoor Design Cooling db | 75 | @ Outdoor (Summer) 1% db | 90 | CTD | 15 | |
| Indoor Design Cooling RH | 45% | Grains Difference | 37 | Daily Range | Medium | |
| Latitude | 41 | Elevation | 669 | ACF | 0.985 | |
| | | | | | | Block Load |

| | | Glass Direction | Construction Detail | Heating HTM | Cooling HTM | Net Area | Heating BTUH | Cooling BTUH | | |
|-----------|--|--|--------------------------------|--------------------------------------|--------------------|-----------------------|---------------------|---------------------|------|--|
| 6A | Windows & Glass Doors | N | Windows, New, U 0.30, SHGC 0.4 | 20.10 | 32.00 | 50 | 1005 | 1600 | | |
| | | S | Windows, New, U 0.30, SHGC 0.4 | 20.10 | 36.08 | 20 | 402 | 722 | | |
| | | E/W | Windows, New, U 0.30, SHGC 0.4 | 20.10 | 54.00 | 20 | 402 | 1080 | | |
| | | | | | | | | | | |
| 6B | Skylights | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| 7 | Wood & Metal Doors | a | Door, R-5 | 13.40 | 5.20 | 18 | 241 | 94 | | |
| | | b | | | | | | | | |
| | | c | | | | | | | | |
| 8 | Above Grade Walls | a | Wall, 2x4, R-11 | 6.03 | 1.08 | 740 | 4462 | 799 | | |
| | | b | | | | | | | | |
| | | c | | | | | | | | |
| | | d | | | | | | | | |
| | | e | | | | | | | | |
| | Partition Walls | f | | | | | | | | |
| | | g | | | | | | | | |
| 9 | Below Grade Walls | a | | | | | | | | |
| | | b | | | | | | | | |
| 10 | Ceilings | a | Ceiling, 10", R-35 | 1.94 | 0.73 | 455 | 884 | 330 | | |
| | | b | | | | | | | | |
| | | c | | | | | | | | |
| | Partition Ceilings | d | | | | | | | | |
| | | e | | | | | | | | |
| 11 | Passive Floors | a | Floor, Crawl Space, R-19 | 3.85 | 0.77 | 455 | 1752 | 350 | | |
| | | b | | | | | | | | |
| | Exposed Floors Slab (Perimeter Ft.) | c | | | | | | | | |
| | | d | | | | | | | | |
| | | e | | | | | | | | |
| | Basement Floor | f | | | | | | | | |
| | | g | | | | | | | | |
| 12 | Infiltration | Envelope Leakage | Average | Heated & Cooled Floor Area = Sq. Ft. | 455 | Above Grade = Cu. Ft. | 3800 | 2805 | 329 | |
| | | No. of Fireplaces | | | | | | | | |
| 13 | Internal Gains | Number of Bedrooms | | | 1 | Occupants | | 2 | 460 | |
| | | Appliance - 2400 BTUH | | | | | | | 2400 | |
| 14 | Sub Totals | | | | | | | 11953 | 8164 | |
| 15 | Duct Loss & Gain | 7F-Ducts in Conditioned Space | | | | | | | | |
| | | R-Value = 8 | Leakage Class .06/.06 | | | | | | | |
| | | Installed Square Feet of Surface or Default = 1 | | | Supply | 1 | Return | 1 | | |
| 16 | Ventilation | Combustion Air From Conditioned Space <input type="checkbox"/> Furnace <input type="checkbox"/> Water Heater | | | Table 8A CFM | | 20 | 1433 | 321 | |
| 19 | Blower Heat Gain | Manufacturer's performance data has blower heat discount | | | | | | | | |
| 20 | Total Sensible Loss or Gain | | | | | | | 13385 | 8485 | |

| | | | | | | |
|---|----|---|-------|-------------|-------|-----|
| DJR HVAC Analysis 4 U Estero FL 239 777 9642 www.acca.org | 21 | Latent Infiltration load for cooling | | | | 502 |
| | | Latent load for occupants | | | | 400 |
| | | Latent load for plants | Small | Medium | Large | 120 |
| | | | | | | 4 |
| | | Latent load for duct in unconditioned space | | | | |
| | | Latent ventilation load for cooling | | | | 489 |
| Total Latent Gain | | | | 1511 | | |