

07PD067

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August 9, 2007

Williams and Associates
125 E. Colorado Blvd.
Suite 2A
Spearfish, SD 57783

RE: Northwest Engineering
New Office Building
At Founders Park
Rapid City, South Dakota

Gentlemen:

The purpose of this letter is to respond to the comments generated by the Rapid City Planning Department with regard to the sound level of the outdoor HVAC equipment. Attached is the sound power data for the condensing units located on the ground approx 30 ft from the property line and approx 15 ft from the building. There will be approx 10 units ranging in capacity from 3 tons to 5 ton cooling capacity.

The overall sound power in db(a) for each are:

5.0 ton Condensing units	76 dB
4.0 ton Condensing units	76 dB
3.0 ton Condensing units	75 dB

Db stands for decibels and is on a logarithmic scale. Each 10 db is 10 times more watts of energy, but to the human ear 10 db is perceived as 2 times the sound.

Using the criterial of the 1997 ARI standard 275, Application of Sound Rating Levels of Outdoor Unitary Equipment the attached table has been provided showing the calculation procedure, the resultant sound power level at the property line would be **54.5 dB.**

In the absence of a local sound ordinance, we have used the City of Sioux Falls ordinance which reportedly require systems to comply with the following levels by taking a time weighted reading for 10 minutes at the property line or 50 ft from the building with a hand held meter reading db(a):

Commercial districts	65 db night and day
Residential	60 db day 55 db night

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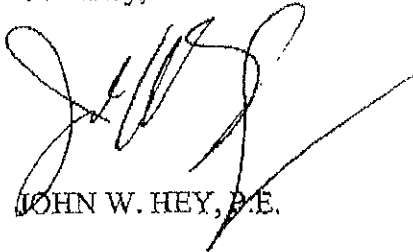
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Rapid City Growth
Management Department

The proposed installation will meet the above criteria.

Please contact me if there are any questions or if additional information is required.

Sincerely,



JOHN W. HEY, P.E.

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Sound Evaluation

Northwest Engineering

at Founders Park

Rapid City, SD

Date:08-09-07

Calculation based on criteria
from 1997 ARI standard 275.

Line	Distance to equipment from evaluation point (ft)	30 ft
1	HVAC unit sound rating level	76 dB
2	Equipment location factor (Table 1.1)	3 dB
3	Multiple unit installation factor (Table 3)	2.5 dB
4	Add line 1,2 & 3	81.5 dB
5	Barrier shielding factor (Table 1, Item 2)	0 dB
6	Sound path factor (Table 1, Item 3)	0 dB
7	Distance factor (Table 2)	27 dB
8	Add lines 4,5 & 6	27 dB
9	Estimated weighted sound pressure level (dB) (Subtract line 8 from 4)	54.5 dB

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254892-YTG-H-0507

ACCESSORIES

Refer to Price Manual for specific model numbers.

HARD START KIT - Provides increased starting torque for areas with low voltage.

COMPRESSOR BLANKET - Designed to further reduce the normal compressor operating sound. Refer to price pages for specific match-ups.

OFF CYCLE TIMER DELAY - Provides a 5-minute off cycle to prevent rapid recycling of the compressor.

ROOM THERMOSTATS - A wide selection of compatible thermostats are available to provide optimum performance and features for any installation.

1H/1C, manual changeover electronic non-programmable thermostat.

1H/1C, auto/manual changeover, electronic programmable, deluxe 7-day, thermostat.

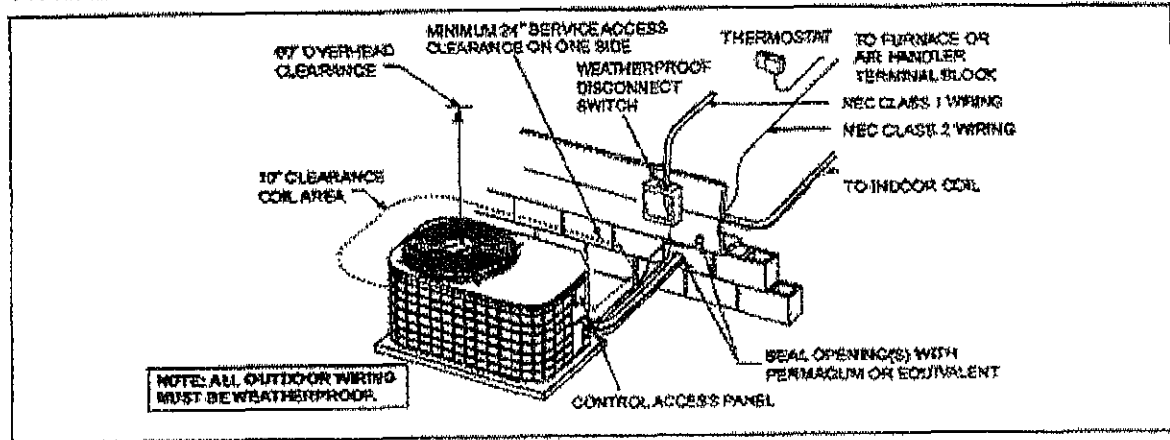
1H/1C, auto/manual changeover, electronic programmable.
* For the most current accessory information, refer to the price book or consult factory.

SOUND POWER RATINGS*

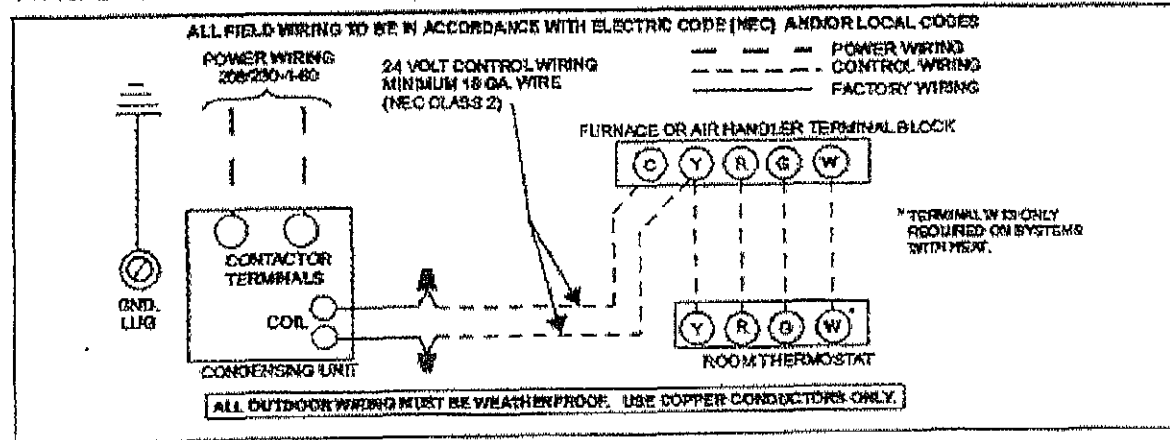
UNIT MODEL	(dBA)
018	75
024	74
030	75
036	75
042	76
048	76
050	75

* Rated in accordance with ANSI 270-25 Standards.

TYPICAL INSTALLATION



TYPICAL FIELD WIRING - 1 Phase Application



Unitary Products Group

This should be listed in the tech guide of whatever unit you are looking for.

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8/8/2007