

TT300 Sound Power Measurements

The sound power measurements for the TT300 have been established by CRIQ (Centre de Recherche Industrielle Quebec), which is ISO 9001 registered, certificate no. 008999. The Test Division is also accredited by the National Council of Canada, certificate no. 138.

- 250kW Refrigeration capacity
- 350kW Refrigeration capacity

Below are the results taken from the report "Sound Power Measurements on a Turbocor TT300 Compressor", file no. 29976.

The sound power levels on the TT300 compressor are measured in compliance with ISO 9614-1 (1993) and are given in decibels and in A-scale dB(A).

Two series of sound power measurements were performed on the unit while in two different modes:

Results

The sound power measured under each operational mode is presented in Table 1.

Table 1 Sound Power Measurements

Operation Mode	Sound Power (A-Scale)	Sound Power (Linear Scale)	Dominant Frequency
250 kW	81.5 dB(A)	81.5 dB(Lin)	1070 Hz
350 kW	86.0 dB(A)	85.5 dB(Lin)	1180 Hz

Table 2 presents the results of sound pressure calculations for various distances while the compressor is installed on top of a building.

Table 2 Sound Pressure Calculation

Distance in Relation to Compressor (meters)	Operational Mode of Compressor	
	250 kW	350 kW
1	72.5 dB(A)	78.0 dB(A)
2.5	65.5 dB(A)	70.0 dB(A)
5	59.5 dB(A)	64.0 dB(A)
8	55.5 dB(A)	60.0 dB(A)
30	43.0 dB(A)	48.5 dB(A)

Table 2 Sound Pressure Calculation

Distance in Relation to Compressor (meters)	Operational Mode of Compressor	
	250 kW	350 kW
100	32.5 dB(A)	38.0 dB(A)

Table 3 presents the results of sound power spectrum measurements for each operational mode.

Table 3 Sound Power Spectrum

Frequency	Operational Mode of Compressor			
	250 kW		350 kW	
64 Hz	38 dB(A)	48 dB(Lin)	38 dB(A)	48 dB(Lin)
125 Hz	48 dB(A)	57 dB(Lin)	54 dB(A)	60 dB(Lin)
250 Hz	48 dB(A)	55 dB(Lin)	53 dB(A)	57 dB(Lin)
500 Hz	48 dB(A)	51 dB(Lin)	54 dB(A)	56 dB(Lin)
1 kHz	56 dB(A)	56 dB(Lin)	58 dB(A)	58 dB(Lin)
2 kHz	52 dB(A)	51 dB(Lin)	56 dB(A)	55 dB(Lin)
4 kHz	54 dB(A)	52 dB(Lin)	57 dB(A)	56 dB(Lin)