

**FAN SCHEDULE**

Mark	Model (Greenheck)	Wheel Diameter (in.)	Requested Volume (CFM)	Volume (CFM)	External SP (in. wg)	Total SP: (in. wg)	Fan Speed (RPM)	Tip Speed (ft/min)	Outlet Velocity (ft/min)	Operating Power (hp)	dBA	Inlet Sones	Motor Size (hp)	Enclosure	Voltage	Phase	Cycle	EC Motor	Total Weight (lb)	High Temp	Comments
F-1	SE1-12-432-VG	12	1,189	1,189	0.25	0.25	1679	5,276	1,450	0.14	57	8.2	1/4	ODP	115	1	60 Cycle	VariGreen	27	No	c/w discharge hood with birdscreen, inlet safety screen and BDD.

**MECHANICAL SPECIFICATION**

MECHANICAL SUB CONTRACTOR SHALL SUBMIT PRICE BASED ON SUPPLY AND INSTALLATION OF EQUIPMENT AND MATERIAL NECESSARY TO PROVIDE A COMPLETE AND FULLY FUNCTIONAL MECHANICAL PACKAGE. MECHANICAL PACKAGE TO CONSIST OF EQUIPMENT AND MATERIALS AS DESCRIBED IN THE DRAWINGS AND SPECIFICATIONS.

DO NOT SCALE DRAWINGS.

**SECTION 15010 GENERAL CONDITIONS**

1. PROVIDE ALL LABOUR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE AND FULLY FUNCTIONAL MECHANICAL SYSTEM AS SHOWN ON THE DRAWINGS AND DESCRIBED IN THESE SPECIFICATIONS.

2. CONTRACT DOCUMENTS

2.1. THE MECHANICAL DRAWINGS AND SPECIFICATIONS ONLY FORM A PART OF THE COMPLETE CONTRACT DOCUMENTS. THE CONTRACTOR AND MECHANICAL SUB CONTRACTOR SHALL CAREFULLY READ ALL PROJECT DRAWINGS AND SPECIFICATIONS INCLUDING ARCHITECTURAL AND ELECTRICAL DRAWINGS AND SPECIFICATIONS.

2.2. IN THE EVENT OF A DISCREPANCY IN THE DRAWINGS AND SPECIFICATIONS THE CONTRACTOR SHALL NOTIFY THE CONTRACT ADMINISTRATOR IN WRITING PRIOR TO BID CLOSING SO THAT CLARIFICATION CAN BE ISSUED BY ADDENDUM. NO EXTRAS WILL BE ALLOWED AS A RESULT OF CONTRACTORS' FAILURE TO NOTIFY THE CONTRACT ADMINISTRATOR OF DISCREPANCIES DURING THE BID PERIOD.

2.3. IN THE EVENT THAT AN ITEM IS SHOWN ON THE DRAWINGS BUT NOT SPECIFIED OR SPECIFIED AND NOT SHOWN ON THE DRAWING THE ITEM SHALL BE INCLUDED AS IF IT WERE SHOWN IN BOTH LOCATIONS.

3. ALL NECESSARY PERMITS SHALL BE OBTAINED AND ALL FEES SHALL BE PAID TO CARRY OUT THE SPECIFIED WORK.

4. ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM DATE OF COMPLETED WORK ACCEPTANCE BY THE ENGINEER. SUBMIT DOCUMENTATION IDENTIFYING ADDITIONAL EQUIPMENT WARRANTY COVERAGE AND TIME FRAMES.

5. ALL WORK SHALL COMPLY IN EVERY RESPECT WITH ALL NATIONAL, PROVINCIAL, AND LOCAL BY-LAWS AND CODES, WHICH SHALL BE CONSIDERED PART OF THIS SPECIFICATION.

6. ALL CUTTING, PATCHING, FLASHING FOR WORK AS REQUIRED HEREIN SHALL BE BY THE CONTRACTOR.

7. THE MECHANICAL SUB CONTRACTOR SHALL INSTALL THE SYSTEM IN COMPLETE ACCORDANCE WITH THE RECOMMENDATIONS OF THE ASHRAE, AND SMACNA-LATEST EDITION DUCT STANDARDS, AND LOCAL CODES.

8. CO-ORDINATE WORK WITH THE WORK OF OTHER TRADES TO AVOID CONFLICTS.

9. ALTER THE LOCATION OF DUCTS OR EQUIPMENT AT THE DIRECTION OF THE CONTRACT ADMINISTRATOR WITHOUT CHARGE TO THE CITY OF WINNIPEG, PROVIDED THE CHANGE IS MADE BEFORE INSTALLATION AND DOES NOT NECESSITATE ADDITIONAL MATERIALS.

10. BID PRICE SHALL BE BASED ON THE USE OF SPECIFIED MANUFACTURERS.

11. FURNISH ONE (1) HARD-COVERED 3-RING BINDER CONTAINING THEREIN ONE (1) COMPLETE SET OF MANUFACTURERS' OPERATING AND MAINTENANCE INSTRUCTIONS SHOWING ALL MAJOR EQUIPMENT, AND APPARATUS REQUIRING MAINTENANCE. INSTRUCTIONS SHALL BE COMPLETE FOR INSTALLATION, OPERATION, AND MAINTENANCE AND SHALL INCLUDE PERTINENT INFORMATION SUCH AS DETAILED DRAWINGS AND OPERATION CURVES. SUPPLIER PARTS, SUPPLIER LISTS AND ADDRESSES SHALL BE PROVIDED. INSTRUCTIONS SHALL BE PROVIDED FOR THE CITY OF WINNIPEG'S REPRESENTATIVE TO ENSURE A THOROUGH UNDERSTANDING OF THE EQUIPMENT AND ITS OPERATION.

12. ALL WIRING, SUPPLY AND INSTALLATION OF DISCONNECT SWITCHES FOR EQUIPMENT SPECIFIED HEREIN SHALL BE PERFORMED BY THE ELECTRICAL SUB CONTRACTOR, UNLESS OTHERWISE NOTED.

VENTILATION CALCULATION SUMMARY	
Ventilation calculations based on	ASHRAE 62.1-2013
uses	vehicle storage
rate (per person)	0
occupant load	0
rate (per square foot)	1.5
Area (Sq ft)	793.012
Area (sq m)	73.7
Ventilation capacity required (CFM)	1189.518
Ventilation capacity required (L/S)	559.07346



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