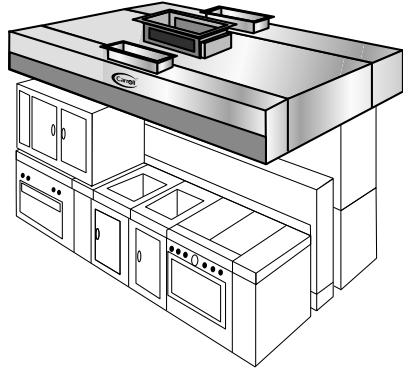




ITEM NO. \_\_\_\_\_

**Carroll Manufacturing International**  
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**PRODUCT SPECIFICATIONS**

Furnish Carroll Ventilator Model W1-C-MS-S \_\_\_\_\_ (ventilator with fire damper) or Model NW1-C-MS-S \_\_\_\_\_ (ventilator without fire damper), as shown on plans, in the depth indicated, in the overall length of \_\_\_\_\_, and to meet the following specifications.

**GENERAL DESCRIPTION:** Ventilator is a high velocity, centrifugal grease extractor with two air inlet slots, one on each side of a single extractor. One slot shall have an adjustable baffle for regulation of the ratio of exhaust volume between the slots. Grease extraction efficiency shall be 95% when properly installed and operated per Carroll recommendations. Extracted grease to be accumulated out of the exhaust air stream on fixed-in-place, full-length, self-draining internal baffles; and removed periodically during the hot water/detergent cleaning cycle as controlled by the FVC Control Panel. Full length non-gasketed, quick-opening latch-type hinged inspection doors to be provided for inspection and servicing of extraction chamber and wash manifold.

Ventilator shall include means for hanging or otherwise supporting. The fire damper shall be  280°F fuse link or  thermostatically activated, with damper closure set to occur at 280°F. To reduce exhaust volume over specific cooking equipment, you must request  Reduced Throat air baffles by adding the suffix "RT" to the model number.

**MAKE-UP AIR OPTIONS:** Ventilator shall include an air supply plenum with duct collar(s) and incorporate one of the following designs:

- Registers along the front panel for face discharge (Add suffix "SR" to the model number.)
- Perforated stainless steel front panels for face discharge (Add suffix "SP" to the model number.)
- Vertical full-length adjustable registers for perimeter downward discharge (Add suffix "SV" to the model number.)
- Adjustable registers for discharging directly into cavity of the ventilator (Add suffix "SI" to the model number.)

**CONSTRUCTION MATERIALS:** The ventilator shall be 18 gauge, type 304 all stainless steel construction. A number 4 finish shall be provided on all exposed surfaces.

**LIGHT FIXTURES:** Ventilator shall be equipped with  100 Watt Dome Incandescent or  Recessed 150 Watt Incandescent or  Recessed Fluorescent Fixtures. Light fixtures shall be prewired to a single connection point at the factory. Ventilators built in multiple sections shall be furnished with junction boxes for field connections by electrical contractor.

**APPROVALS:** Ventilator shall be U.L. Listed, listed by NSF, and in accordance with all recommendations of NFPA 96. The ventilator must meet all applicable codes.

*Elite Series*

Single Manifold Wash Ventilator

- **Model W1-C-MS-S**
- **Model NW1-C-MS-S**

**APPLICATION**

Ceiling mounted canopy style ventilator with integral make-up air discharge for typical island style cooking arrangements using light, medium, or heavy-duty equipment on one side and light-duty equipment on the other. The distance between the equipment is not to exceed 30". Consult factory for exceptions and refer to the Carroll Master Engineering Table for determination of light, medium and heavy-duty equipment. See "Air Supply Options" (below) and engineering views (reverse side) for available designs.

**DESCRIPTION**

These Elite Series models are island canopy, hot water and detergent wash ventilators which are U.L. Listed under either the category "Exhaust Hood with Exhaust Damper," for the W1-C-MS-S models or "Exhaust Hood without Exhaust Damper," for the NW1-C-MS-S models. Units are offered in a selection of depths. All models feature integral internal grease extracting baffles arranged to provide very high extraction rates. The W1-C-MS-S model features a spring loaded, fuse-link fire damper located at the duct collar. A thermostatically-activated damper is available as an option.

**OPERATION**

When properly operated and maintained, 95% grease extraction may be accomplished. As air is drawn around the internal stainless steel baffles, grease, dust and lint particles are thrown out of the airstream by centrifugal force and collected. Liquified grease drains off into the sloping gutter, and all inner surfaces are periodically washed. Any "W1" Series model can be totally integrated with Carroll W2 and DX Series Ventilators.

**MAINTENANCE**

At periodic intervals the full-length inspection doors should be opened for inspection of the internal components. Refer also to the Owner's Technical Manual for in-depth maintenance information.

**AIR SUPPLY OPTIONS**

**"SR" & "SP" Style - Register or Perforated Front Panel Discharge**

Facing panel openings can typically supply 80% or more of exhaust air volume. Recommended supply air temperature range is 60° to 65°F, but, dependent upon volume, distribution and internal heat load, may be as low as 50°F.

**"SV" Style - Vertical Perimeter Discharge**

Up to 80% of the exhaust air volume may be supplied through this system. To avoid discomfort to personnel, air must be tempered to 65°F or higher.

**"SI" Style - Internal Discharge**

Volume of make-up air supplied through this design varies with the type of cooking equipment used. Air may be untempered in most areas, dependent upon climate and cooking equipment. Consult factory for specific air supply volumes and where winter temperatures drop below 10°F.

**COMBINATION SUPPLY AIR**

More than one supply air option may be specified on a Carroll ventilator, the following are the possible combinations of supply air: SP/SI, SV/SI, SR/SI, SP/SV, SR/SV and SR/SP.

**EXHAUST/SUPPLY FAN UNITS**

Exhaust fan(s) and supply fan(s) are to be furnished and installed by others to meet the Carroll Ventilator air volumes and static pressure drop for the entire system and must be in compliance with local codes.

- Exhaust fan(s) should be properly sized and include induced draft, squirrel cage design with backward inclined or air-foil type blades.
- Discharge ducts should be vertical and located away from air intakes.
- Supply fan(s) should be equipped with throwaway or cleanable type filters.
- Exhaust and supply fans require a magnetic starter switch with a 120 volt holding coil and should be electrically interlocked for simultaneous operation.

**FIRE PROTECTION**

NFPA 96 and most other codes require a fire extinguishing system for protection of both the duct collar and plenum areas of ventilators and for the protection of cooking equipment (such as fat fryers, griddles, ranges and broilers) which may be a source of ignition of grease. Check with local fire authorities for exact requirements.

**OPTIONAL EQUIPMENT**

Consult Carroll regarding custom services addressing:

- Exhaust Fans, Supply Fans & Roof Top Units
- Fire Protection Systems
- Heat Recovery Units
- Reduced Throat (low air volume ventilators)
- Utility Distribution Systems
- Air Purification Units



**Model W1-C-MS-S** (With Fire Damper)

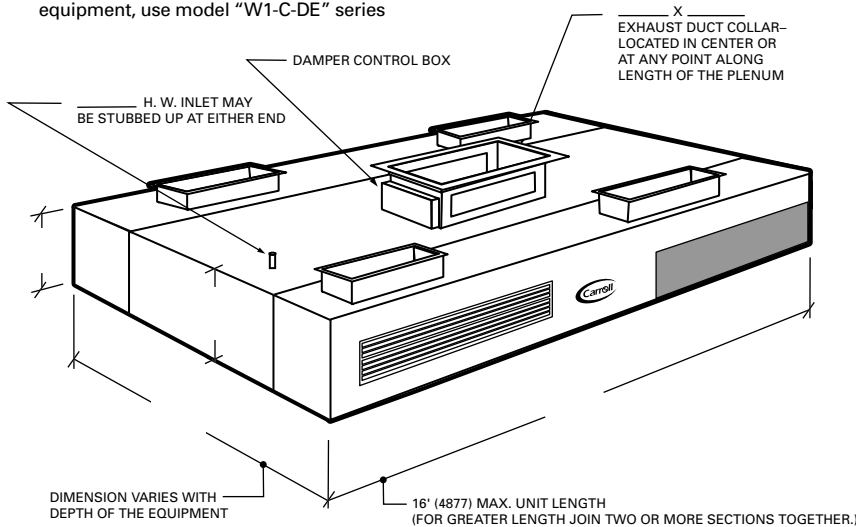
**Model NW1-C-MS-S** (Without Fire Damper)



To complete the model number, insert the supply air option and desired depth of the unit in inches.

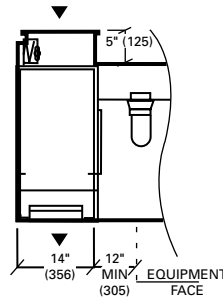
Example: "W1-C-MS-SP-108" (See "Supply Air Option" and typical "Section View" below.)

Note: For island applications where both cooking lines are heavy duty equipment, use model "W1-C-DE" series

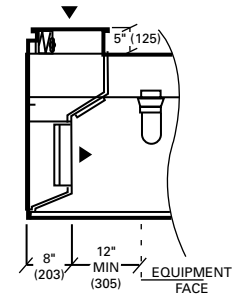


**Supply Air Options**

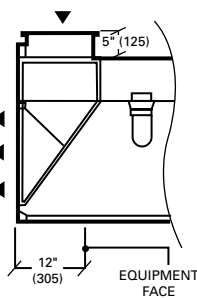
**SV**  
Supply air vertical



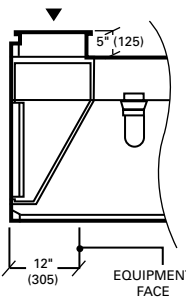
**SI**  
Supply air internal



**SP**  
Supply air perforated



**SR**  
Supply air registers



**Engineering Data**

**SUPPLY AIR OPTIONS**

For supply air option add one of the following suffixes to the model number:

- SP
- SR
- SV
- SI

**MECHANICAL REQUIREMENTS**

The type of cooking equipment and the type and volume of cooking determines the total exhaust volume. Refer to the Carroll Manufacturing Engineering Table to determine exhaust volume, duct sizes and static pressure. The "W1-C-MS-S" ventilator operates at a total of 400 CFM/Lin. ft. (619 L/s/Lin. m.), 250 CFM/Lin. ft. (387L/s/Lin. m.) on the heavy side and 150 CFM/Lin. ft. (233 L/s/Lin. m.) on the light side. Note: If the ventilator is to operate at a total of 300CFM/Lin.ft. (466 L/s/Lin.m.), 150 CFM/Lin.ft. (233 L/s/Lin.m.) on each side, a 400 MS ventilator with "RT" restricted throat must be used. If installation requires more exhaust, as determined per the Master Engineering Table, select back-to-back ventilators, Model "W1-C-DE" series (consult Carroll for details).

**ELECTRICAL**

Provide 120 volt, 20 amp, 24-hour service to Carroll FWC Fan/Wash Control Panel. (See FWC Fan/Wash Control Panel specification sheet for details.) To be fused separately. Lights to be on a separate circuit, 120 volt.

**VENTILATOR LENGTHS**

Maximum unit length is 16'-0" (4877 mm). For greater lengths, two or more sections must be joined. Check to ensure that there is adequate access into building and kitchen area.

**HANGING WEIGHT**

Ventilator Depth	8'-6"	9'-0"	9'-6"	10'-0"
	(2591)	(2743)	(2896)	(3048)
Wt./linear ft. lbs.	130	135	140	150
Wt./linear m. kg.	193	201	208	223

Item No: \_\_\_\_\_ Est. Wt.: \_\_\_\_\_

Length: \_\_\_\_\_ Width: \_\_\_\_\_

Height: \_\_\_\_\_

Exhaust - CFM: \_\_\_\_\_ S. P.: \_\_\_\_\_ Collar: \_\_\_\_\_

Supply - CFM: \_\_\_\_\_ S. P.: \_\_\_\_\_ Collar: \_\_\_\_\_

Supply - CFM: \_\_\_\_\_ S. P.: \_\_\_\_\_ Collar: \_\_\_\_\_

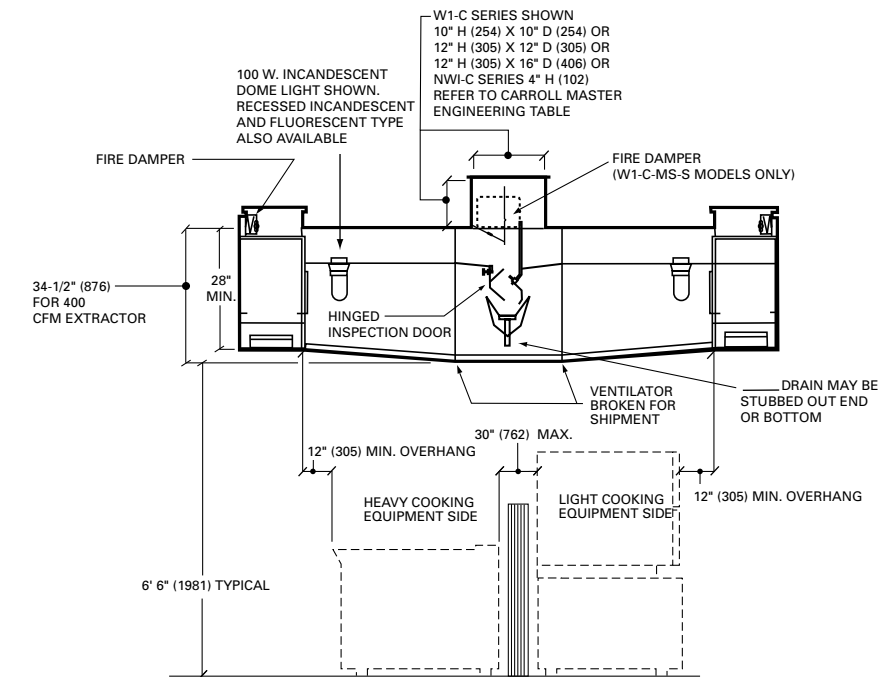
(heavy side)

(light side)

\_\_\_ GPM @ 40 PSI Water Temp. 140° - 180°F

**Perspective View**

N.T.S. (FULL BOX-SHAPE SHOWN)



**Section View**

N.T.S.(TAPERED SHAPE SHOWN)

NOTE: Dimensions in parenthesis ( ) are millimeters.