

#### A. SuperDuct RC Air Duct Systems

1. The contractor shall furnish SuperDuct RC Air Duct fabricated by a Johns Manville Qualified Fabricator or shall be a Johns Manville Qualified Contractor (Johns Manville Factory-Qualified Programs). Fabrication shall be in accordance with the following provisions.
2. The contractor shall furnish ductwork fabricated from any or all of the following material(s):
  - 1" (25 mm) SuperDuct RC Type 475;
  - 1½" (38 mm) SuperDuct RC Type 800;
  - 2" (51 mm) SuperDuct RC Type 800as indicated in the drawings, excluding applications listed in Section E. All air turning vanes shall meet the ASHRAE/SMACNA guidelines for double wall vane air flow performance.
3. All fabrication and installation shall be in accordance with the manufacturer's written fabrication manual, the 2001 (or later) NAIMA Fibrous Glass Duct Construction Standards, The Pocket Installer, or Johns Manville fabrication submittal sheets.

#### B. System Performance

- The installed 1" (25 mm) SuperDuct RC Air Duct Board shall have a Thermal Resistance (R-Value) of 4.3 (RSI 0.76) at 75°F (24°C) mean temperature, and a Noise Reduction Coefficient (NRC) of 0.75 per ASTM C 423-90 (Type "A" mounting).
- The installed 1½" (38 mm) SuperDuct RC Air Duct Board Type 800 shall have a Thermal Resistance (R-Value) of 6.5 (RSI 1.15) at 75°F (24°C) mean temperature, and a Noise Reduction Coefficient (NRC) of 0.90 per ASTM C 423-90 (Type "A" mounting).

#### C. Performance Requirements

SuperDuct RC System products shall be factory coated with a black acrylic polymer formulated with an immobilized, EPA-registered, protective agent to protect the coating from potential growth of fungus and bacteria, and shall meet the requirements of the following test procedures:

- a. No detectable fiber loss under electron microscope analysis of isokinetic air sampling at maximum rated velocity, using UL 181 test duct configuration.
- b. No observed microbial growth on the coated surface based on ASTM G-21 and G-22 tests for fungus and bacteria growth.
- c. Conformance to the requirements of NFPA 90A and 90B for FHC 25/50 and limited combustibility.
- d. Conformance to the requirements of the State of Washington Building Services Department requirements for emissions of total volatile organic compounds (TVOC) and formaldehyde (CHOH) in accordance with ASTM D 5116-90.
- e. UL 181 requirements for Class 1 label, with a maximum velocity rating of 6000 fpm (30.5 m/s), which provides for a composite rating of duct material, closures and assembly.

#### D. Closure and Reinforcement

1. Duct closures shall utilize materials in compliance with the requirements of UL 181A. Pressure sensitive (UL 181A-P), heat sealed (UL 181A-H), or glass fabric and mastic (UL 181A-M) closures must be so identified by the manufacturer. All joints shall be stapled or cross tabbed except machine-made longitudinal joints. Field connections to equipment or metal ductwork shall include mechanical fasteners.
2. Reinforcing on systems with internal static pressures up to and including 2" w.c. (498 Pa), shall be in accordance with the manufacturer's recommendations, as described in the NAIMA Fibrous Glass Duct Construction Standards Manual, and The Pocket Installer. Anti-sag supports shall be placed in positive pressure ducts 48" (1219 mm) or larger as shown in The Pocket Installer.

#### E. Quality Provisions

1. Joint misalignment shall not exceed a ¼" (6.4 mm) offset.
2. Where male/female joints and/or staple flaps are not used, 8" (203 mm) strips of Therm-Lock closure shall be placed on 12" (305 mm) centers, minimum of one per side.
3. All joints shall be firmly seated as evidenced by no air gaps under the closure.
4. All ABI dots on heat-seal closures shall be darkened.
5. Any facing tears shall be repaired with a UL 181A closure.
6. Any airstream damage shall be repaired with SuperSeal® Edge Treatment, SuperSeal® Duct Butter or SuperSeal® HV.
7. SuperDuct RC to metal connections shall include mechanical fasteners, minimum one per side on 12" (305 mm [max.]) centers.
8. Movable duct internals shall be installed with adequate clearance to avoid contact with the airstream surface, or a metal rubbing plate shall be installed.

# SuperDuct® RC™ Air Duct Systems

## Guide Specifications

### F. Restrictions and Limitations

It is recommended that SuperDuct RC Air Duct Systems **not** be used in the following applications:

1. For vertical risers serving more than two floors.
2. In air duct systems operating normally above 250°F (121°C).
3. For kitchen or corrosive fume exhaust ducts.
4. To convey solids or corrosive gases.
5. To build casings or housings.
6. Not closer than 2" (51 mm) to electric heating coils.
7. In systems supplying hospital sensitive areas such as surgical suites, maternity wards, intensive care units, and isolation areas where 90% effective (or greater) terminal filtration is not used (per US Department of Health, Education and Welfare).
8. In equipment rooms where severe mechanical abuse can occur.
9. In low clearance garages.
10. Outdoors.
11. For velocities or pressures beyond recommendations.
12. Within six feet (1.8 m) of fresh air intakes or outside grilles.
13. Bathroom exhaust exposed to sub-freezing temperatures.
14. In contact with any HVAC equipment wet surface.

### Limited Warranty

1. Duct fabrication and installation shall meet the warranty requirements specified in the Johns Manville 10 Year Limited Warranty Document.
2. The Johns Manville 10 Year Limited Warranty Document shall be available to the building owner upon written request of the Johns Manville Factory Qualified Shop provided the conditions of the Limited Warranty Document are met.

### ISO 9000 Certification

Johns Manville mechanical insulation products are designed, manufactured and tested in our own facilities, which are certified and registered to stringent ISO 9000 (ANSI/ASQC 90) series quality standards. This certification, along with regular, independent third-party auditing for compliance, is your assurance that Johns Manville products deliver consistent high quality.



### North American Sales Offices, Insulation Systems

#### Eastern Region

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#### Western Region and Canada

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## Johns Manville

### Insulation Systems

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The physical and chemical properties of SuperDuct® RC™ Air Duct Systems represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Numerical flame spread and smoke developed ratings are not intended to reflect hazards presented by this or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you to assure current information. **All Johns Manville products are sold subject to Johns Manville's Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville Limited Warranty and Limitation of Remedy, and information on other Johns Manville thermal insulations and systems, call (800) 654-3103.**