



SuperDuct® RC™

High Performance Air Duct Board

Description

SuperDuct RC Air Duct Board is made from strong, resilient glass fibers bonded with a thermosetting resin. Male/female joints are factory made on the transverse edges of each board. A tough FSK (foil-scrim-kraft) facing is laminated to the exterior surface of the board.

Reinforced Coating System

The airstream surface of SuperDuct RC features Johns Manville's exclusive Reinforced Coating System – a high-tensile glass mat that reinforces our proven Permacote® acrylic polymer coating to provide a smooth surface with excellent durability and acoustical properties.

Available Forms

SuperDuct RC is available in cartons or pallets in 1", 1½" or 2" (25, 38 or 51 mm) thicknesses. Standard board sizes are 48" x 120" and 48" x 96" (1219 mm x 3048 mm and 1219 mm x 2438 mm).

Wide Board™. SuperDuct RC is also available in Johns Manville's exclusive 96" x 120" (2438 mm x 3048 mm) Wide Board size, which effectively eliminates 50% of the duct joints required. Wide Board is stocked in 1" (25 mm) thickness on pallets only. Contact your Johns Manville representative for special handling considerations.

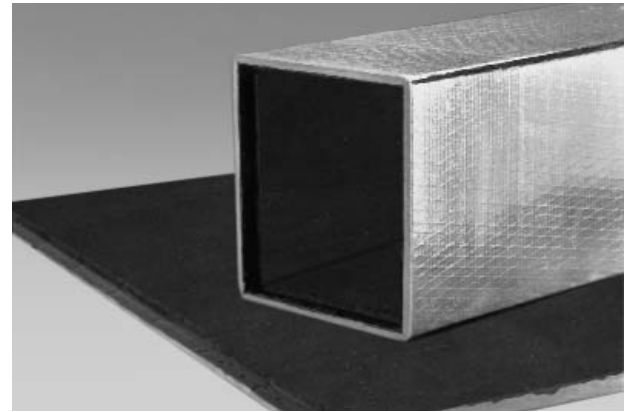
Advantages

Resistant to Dust and Dirt. The acrylic polymer airstream surface coating helps guard against incursion of dust or dirt into the substrate, minimizing the potential for biological growth.

Will Not Support Microbial Growth. Permacote coating is formulated with an immobilized, EPA-registered, protective agent to protect the coating from potential growth of fungus and bacteria.

SuperDuct RC passes ASTM C 1071 fungi testing, as well as the more stringent ASTM G 21. Bacteria tests were conducted in accordance with ASTM G 22. Detailed information is available in Johns Manville fact sheet HSE-103FS.

Note: As with any type of surface, microbial growth may occur in accumulated duct system dirt, given certain conditions. This risk is minimized with proper design, filtration, maintenance and operation of the HVAC system.



Operating Temperature Limit: 250°F (121°C)

If HVAC system cleaning is required, the Permacote airstream surface may be cleaned with industry-recognized dry methods. See the North American Insulation Manufacturers Association (NAIMA) "Cleaning Fibrous Glass Insulated Air Duct Systems."

Quiet Operation. SuperDuct RC features exceptional noise absorbing characteristics. Fabricated SuperDuct RC systems noticeably decrease the audibility of crosstalk, equipment noise, and the sounds associated with the expansion and contraction of sheet metal systems.

Better Temperature Control. The thermal performance inherent in the SuperDuct RC product helps deliver warmed or cooled air at the desired temperatures, and eliminates condensation problems when installed properly.

Extended Performance Parameters. SuperDuct RC meets or exceeds all performance requirements of lined sheet metal and has a velocity rating up to 6000 fpm (30.5 m/sec.).

SMACNA Leakage Class 6. SuperDuct RC, when fabricated and installed per recommendations, exhibits leakage equal to or less than that of sealed spiral metal.

General Properties

Thickness	1 in. (25 mm), 1½ in.* (38 mm)*, 2 in.* (51 mm)*
Air Velocity (max.)	6000 fpm (30.5 m/sec.)
Operating Temperature (max.)	250°F (121°C)
Internal Pressure (max.)	Per UL 181 2" w.c. (498 Pa)

*Type 800 only.

Permeance

FSK Facing .02

Thermal Conductivity

Thickness (in) (mm)	Mean Temp.	
	75°F	24°C
1 25	.23*	.033**
1½ 38	.23*	.033**
2 51	.23*	.033**

Conductivity per ASTM C 518: *Btu·in/(hr·ft²·°F) **W/m·°C

Water Repellency

Per Cent Mass Gain (JM 436-1006) 6.2% (avg.)
INDA IST 80.6-92 ≧6

Thermal Performance

Thickness (in) (mm)	R-Value	
	(hr·ft²·°F)/Btu	m²·°C/W
1 25	4.3	0.76
1½ 38	6.5	1.15
2 51	8.7	1.53

UL Fire Hazard Classification

Flame Spread not over 25
Smoke Developed not over 50

SuperDuct® RC™

High Performance Air Duct Board

Specification Data

Closure Systems

Johns Manville recommends only closure systems which comply fully with the requirements of UL 181A when installed with SuperDuct RC as listed in Johns Manville UL Fabrication Sheet, AHS-204.

Limitation of Liability

If the closure system used is not one of the UL 181 approved systems as listed in Johns Manville's Fabrication Sheet, AHS-204, and if application is not in accordance with the tape manufacturer's stated procedures, the UL 181 air duct rating and all product warranties are void.

Flexural Rigidity

SuperDuct RC Air Duct Board is available in stiffness values of 475 and 800 EI. The stiffness or flexural rigidity is the product of Young's Modulus of Elasticity (E) and the Moment of Inertia (I), as determined in accordance with NAIMA AHC-100-74 (REF, ASTM D 1037).

Maximum Unreinforced Duct Dimensions

Thickness	Internal Pressure (in. water column)	Positive (inches)	Negative (inches)
Type 475	0.5	36	34
1"	1.0	24	22
	2.0	15	14
Type 800	0.5	36	36
1½", 2"	1.0	24	24
	2.0	18	18

Thickness	Internal Pressure (Pa)	Positive (mm)	Negative (mm)
Type 475	125	914	864
25 mm	249	610	559
	498	381	356
Type 800	125	914	914
38, 51 mm	249	610	610
	498	457	457

This table summarizes span/pressure limitations for unreinforced duct. For larger duct sizes, see The Pocket Installer, AHS-3.

SuperDuct RC Sound Absorption Coefficients (Type "A" Mounting)*

Type	Thickness		Frequency (Hz)						
	(in)	(mm)	125	250	500	1000	2000	4000	NRC
475	1	25	.04	.27	.71	.96	1.03	.99	.75
800	1½	38	.11	.45	.96	1.07	1.06	1.00	.90
800	2	51	.14	.81	1.10	1.07	1.03	1.01	1.00

SuperDuct RC Sound Attenuation in dB/ft [dB/0.305 m] (1" [25 mm] thickness)

Type	Duct Size		Frequency (Hz)						
	(in)	(mm)	125	250	500	1000	2000	4000	8000
475	6x12	152 x 305	1.3	2.7	3.5	5.4	6.4	4.6	2.3
475	8x12	203 x 305	1.7	1.8	3.0	5.3	6.0	3.2	1.9
475	12x12	305 x 305	1.9	1.9	2.7	5.7	5.3	2.1	1.8
475	12x24	305 x 610	.7	1.1	2.3	5.0	3.1	2.1	1.7
475	24x24	610 x 610	.4	.8	2.1	3.9	1.2	1.6	1.4

* Tests conducted on 10' (3.1 m) sections in accordance with ASTM E 477-90. Attenuation data for subsequent sections are not accumulative.

Specification Compliance

- UL 181 Class 1 Rigid Air Duct Listed
- NFPA 90A and 90B
- Conforms to ASHRAE 62-2001
- ASTM G-21 and G-22
- Canada: CGSB 51.10-92
CAN/ULC-S110M
- Building Officials Conference of America (BOCA)
- International Conference of Building Officials (ICBO)
- Southern Building Code Congress (SBCC)
- Federal Housing Authority "Minimum Property Standards"
- General Services Administration, Public Building Services, "Standard Air Conditioning Specifications"
- Corps of Engineers "Air Conditioning Guide Specifications"
- Department of Army Guide Specifications-Family Housing
- Department of Defense Guide Specifications-Family Housing
- Department of Navy Guide Specifications-Family Housing

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.



717 17th St.
Denver, CO 80202
(800) 654-3103
(800) 978-2318 FAX
specJM.com

North American Sales Offices, Insulation Systems

Eastern Region
P.O. Box 158
Defiance, OH 43512
(800) 334-2399
Fax: (419) 784-7866

Western Region & Canada
P.O. Box 5108
Denver, CO 80217
(800) 368-4431
Fax: (303) 978-4661

The physical and chemical properties of SuperDuct® RC™ High Performance Air Duct Board listed herein 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 these 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 standard Terms and Conditions including Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions, Limited Warranty and Limitation of Remedy, and information on other Johns Manville thermal insulations and systems, call (800) 654-3103.