

TABLE 6.2.4.2A
Minimum Duct Insulation R-Value,^a Cooling and Heating Only Supply Ducts and Return Ducts

Climate Zone			Duct Location						
Envelope Criteria Table	HDD65	CDD50	Exterior	Ventilated Attic	Unvented Attic with Backloaded Ceiling	Unvented Attic with Roof Insulation	Unconditioned Space ^b	Indirectly Conditioned Space ^c	Buried
Heating Ducts Only									
B-1 to B-7	0-1800	all	none	none	none	none	none	none	none
B-8 to B-12	1801-3600	all	R-3.5	none	none	none	none	none	none
B-13 to B-15	3601-5400	all	R-3.5	none	none	none	none	none	none
B-16 to B-18	5401-7200	all	R-6	R-3.5	none	none	none	none	R-3.5
B-19 to B-20	7201-9000	all	R-6	R-6	R-3.5	none	none	none	R-3.5
B-21 to B-22	9001-10800	all	R-8	R-6	R-6	none	R-3.5	none	R-3.5
B-23	10801-12600	all	R-8	R-6	R-6	none	R-6	none	R-6
B-24	12601-16200	all	R-8	R-8	R-6	none	R-6	none	R-6
B-25	16201-19800	all	R-10	R-8	R-8	none	R-6	none	R-6
B-26	19801+	all	R-10	R-10	R-8	none	R-8	none	R-6
Cooling Only Ducts									
B-15, 18, 20, 22 to 26	all	0-1800	R-1.9	R-1.9	R-1.9	R-1.9	R-1.9	none	none
B-12, 14, 17, 19, 21	all	1801-3600	R-3.5	R-1.9	R-3.5	R-1.9	R-1.9	none	none
B-7, 9, 11, 13, 16	all	3601-5400	R-3.5	R-3.5	R-6	R-1.9	R-1.9	none	none
B-4, 6, 8, 10	all	5401-7200	R-6	R-6	R-6	R-3.5	R-1.9	none	none
B-3, B-5	all	7201-9000	R-6	R-6	R-6	R-3.5	R-3.5	none	R-3.5
B-2	all	9001-10800	R-6	R-6	R-8	R-3.5	R-3.5	none	R-3.5
B-1	all	10801+	R-8	R-8	R-8	R-3.5	R-3.5	none	R-3.5
Return Ducts									
B-1 to B-26	all climates		R-3.5	R-3.5	R-3.5	none	none	none	none

^a Insulation R-values, measured in (h-ft²-°F)/Btu, are for the insulation as installed and do not include film resistance. The required minimum thicknesses do not consider water vapor transmission and possible surface condensation. Where exterior walls are used as plenum walls, wall insulation shall be as required by the most restrictive condition of 6.2.4.2 or Section 5. Insulation resistance measured on a horizontal plane in accordance with ASTM C518 at a mean temperature of 75°F at the installed thickness.

^b Includes crawl spaces, both ventilated and nonventilated.

^c Includes return air plenums with or without exposed roofs above.