

HVAC Material Salient Characteristics

ITEM	QUANTITY	UNIT	ITEM DESCRIPTION
			SPIRAL PIPE (see DUCT MATERIALS AND SEALANTS on page 3 for additional requirements)
1	10	LF	6" 26 GA. SPIRAL PIPE (RAW X CRIMP)
2	10	LF	8" 26 GA. SPIRAL PIPE (RAW X CRIMP)
3	10	LF	10" 26 GA. SPIRAL PIPE (RAW X CRIMP)
4	10	LF	12" 26 GA. SPIRAL PIPE (RAW X CRIMP)
5	10	LF	14" 26 GA. SPIRAL PIPE (RAW X CRIMP)
6	10	LF	16" 26 GA. SPIRAL PIPE (RAW X CRIMP)
			ELBOWS (see DUCT MATERIALS AND SEALANTS on page 3 for additional requirements)
7	1	EA	6 IN DIA 26 GA 90 ADJ ELBOW
8	1	EA	8 IN DIA 26 GA 90 ADJ ELBOW
9	1	EA	10 IN DIA 26 GA 90 ADJ ELBOW
10	1	EA	12 IN DIA 26 GA 90 ADJ ELBOW
11	1	EA	14 IN DIA 26 GA 90 ADJ ELBOW
12	1	EA	16 IN DIA 26 GA 90 ADJ ELBOW
			DAMPER SECTIONS (see DUCT MATERIALS AND SEALANTS on page 3 for additional requirements)
13	1	EA	6" 26 GA. DAMPER SECTION W/1-1/2 STAND-OFF
14	1	EA	8" 26 GA. DAMPER SECTION W/1-1/2 STAND-OFF
15	1	EA	10" 26 GA. DAMPER SECTION W/1-1/2 STAND-OFF
16	1	EA	12" 26 GA. DAMPER SECTION W/1-1/2 STAND-OFF
17	1	EA	14" 26 GA. DAMPER SECTION W/1-1/2 STAND-OFF
18	1	EA	16" 26 GA. DAMPER SECTION W/1-1/2 STAND-OFF
			FLEX DUCT (see FLEXIBLE AIR DUCT on page 4 for additional requirements)
19	25	LF	6" R6 (SILVER JACKET), FLEX DUCT, 25' PCS, W/ COLLAR
20	25	LF	8" R6 (SILVER JACKET), FLEX DUCT, 25' PCS, W/ COLLAR
21	25	LF	10" R6 (SILVER JACKET), FLEX DUCT, 25' PCS, W/ COLLAR
22	25	LF	12" R6 (SILVER JACKET), FLEX DUCT, 25' PCS, W/ COLLAR
23	25	LF	14" R6 (SILVER JACKET), FLEX DUCT, 25' PCS, W/ COLLAR
24	25	LF	16" R6 (SILVER JACKET), FLEX DUCT, 25' PCS, W/ COLLAR
			START COLLARS (see DUCT MATERIALS AND SEALANTS on page 3 for additional requirements)
25	1	EA	6" 26 GA. START COLLAR
26	1	EA	8" 26 GA. START COLLAR
27	1	EA	10" 26 GA. START COLLAR
28	1	EA	12" 26 GA. START COLLAR
29	1	EA	14" 26 GA. START COLLAR
30	1	EA	16" 26 GA. START COLLAR
			REDUCER FITTINGS (see DUCT MATERIALS AND SEALANTS on page 3 for additional requirements)
31	1	EA	12" X 10" 26 GA. REDUCER FITTING
32	1	EA	10" X 8" 26 GA. REDUCER FITTING
33	1	EA	8" X 6" 26 GA. REDUCER FITTING
34	1	EA	9" X 8" 26 GA. REDUCER FITTING
35	1	EA	7" X 6" 26 GA. REDUCER FITTING
			WYE BRANCHES (see DUCT MATERIALS AND SEALANTS on page 3 for additional requirements)
36	1	EA	16" X 14" X 12" 26 GA. WYE BRANCH
37	1	EA	14" X 12" X 10" 26 GA. WYE BRANCH
38	1	EA	14" X 10" X 10" 26 GA. WYE BRANCH
39	1	EA	12" X 10" X 10" 26 GA. WYE BRANCH
40	1	EA	12" X 10" X 8" 26 GA. WYE BRANCH
41	1	EA	10" X 8" X 8" 26 GA. WYE BRANCH
42	1	EA	10" X 8" X 6" 26 GA. WYE BRANCH
43	1	EA	8" X 8" X 6" 26 GA. WYE BRANCH
44	1	EA	8" X 6" X 6" 26 GA. WYE BRANCH
			MISCELLANEOUS (see DUCT MATERIALS AND SEALANTS on page 3 for additional requirements)
45	1	GAL	DP-181 DUCT SEALER (GRAY)
46	1	EA	2" CHIP BRUSH
47	1	EA	FLEX-FIX DUCT TAPE
48	1	EA	3" FSK INSULATION TAPE
49	100	LF	1-1/2" X 48" X 100' FSK INSULATION
50	1	EA	3/4" FLAGGING TAPE
51	1	EA	POLYURETHANE CAULKING (GRAY)
52	1	EA	2" FOIL TAPE
53	1	EA	BLACK SPRAY PAINT

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54	1	EA	SPRAY ADHESIVE
55	1	EA	WD-40
56	1	EA	RAGS (TEE SHIRT TYPE)
57	1	EA	1/8" DRILL BIT (METAL)
58	1	EA	METAL CUTTING SAWZALL BLADES
59	1	EA	EXPANDING FOAM
60	1	EA	1-1/2" BOX STRAP
61	200	LF	24" X 200' BLUE PLASTIC DUCT COVERING

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DUCT MATERIALS AND SEALANTS

- A. General: Except for systems specified otherwise, construct ducts, casings, and accessories of galvanized sheet steel, ASTM A653, coating G90.
- B. Specified Corrosion Resistant Systems: Stainless steel sheet, ASTM A167, Class 302 or 304, Condition A (annealed) Finish No. 4 for exposed ducts and Finish No. 2B for concealed duct or ducts located in mechanical rooms.
- C. Joint Sealing: Refer to SMACNA HVAC Duct Construction Standards, paragraph S1.9.
 - 1. Sealant: Elastomeric compound, gun or brush grade, maximum 25 flame spread and 50 smoke developed (dry state) compounded specifically for sealing ductwork as recommended by the manufacturer. Generally provide liquid sealant, with or without compatible tape, for low clearance slip joints and heavy, permanently elastic, mastic type where clearances are larger. Oil base caulking and glazing compounds are not acceptable because they do not retain elasticity and bond.
 - 2. Tape: Use only tape specifically designated by the sealant manufacturer and apply only over wet sealant. Pressure sensitive tape shall not be used on bare metal or on dry sealant.
- D. Approved factory made joints may be used.
- E. Round and Flat Oval Ducts: Furnish duct and fittings made by the same manufacturer to insure good fit of slip joints.
 - 1. Elbows: Diameters 80 through 200 mm (3 through 8 inches) shall be two sections die stamped, all others shall be gored construction, maximum 18-degree angle, with all seams continuously welded or standing seam.
 - 2. Provide bell mouth, conical tees or taps, laterals, reducers, and other low loss fittings as shown in SMACNA HVAC Duct Construction Standards.
 - 3. Ribbed Duct Option:
 - a. Ducts: Manufacturer's published standard gage, G90 coating, spiral lock seam construction with an intermediate standing rib.
 - b. Fittings: May be manufacturer's standard as shown in published catalogs, fabricated by spot welding and bonding with neoprene base cement or machine formed seam in lieu of continuous welded seams.

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FLEXIBLE AIR DUCT

- A. General: Factory fabricated, complying with NFPA 90A for connectors not passing through floors of buildings.
- B. Flexible ducts shall be listed by Underwriters Laboratories, Inc., complying with UL 181. Ducts larger than 200 mm (8 inches) in diameter shall be Class 1. Ducts 200 mm (8 inches) in diameter and smaller may be Class 1 or Class 2.
- C. Insulated Flexible Air Duct: Factory made including mineral fiber insulation with maximum C factor of 0.25 at 24 degrees C (75 degrees F) mean temperature, encased with a low permeability moisture barrier outer jacket, having a puncture resistance of not less than 50 Beach Units. Acoustic insertion loss shall not be less than 3 dB per 300 mm (foot) of straight duct, at 500 Hz, based on 150 mm (6 inch) duct, of 750 m/min (2500 fpm).
- D. Application Criteria:
 - 1. Temperature range: -18 to 93 degrees C (0 to 200 degrees F) internal.
 - 2. Maximum working velocity: 1200 m/min (4000 feet per minute).
 - 3. Minimum working pressure, inches of water gage: 2500 Pa (10 inches) positive, 500 Pa (2 inches) negative.
- E. Duct Clamps: stainless steel strap with cadmium plated worm gear tightening device. Apply clamps with sealant and as approved for UL 181, Class 1 installation.