

Hanger Strap

SUBMITTAL SHEET

TABLE 4-2
 MINIMUM HANGER SIZES FOR ROUND DUCT

Diameter	Maximum Spacing	Wire Diameter	Rod	Strap
10" dn 250 mm dn	12' 3.7 m	One 12 ga. One 2.75 mm	1/4" 6.4 mm	1" x 22 ga. 25.4 x 0.85
11-18"	12'	One 12 ga. One 8 ga.	1/4"	1" x 22 ga.
460 mm	3.7 m	One 4.27 mm	6.4 mm	25.4 x 0.85
19-24" 610 mm	12' 3.7 m	Two 10 ga. Two 3.51 mm	1/4" 6.4 mm	1" x 22 ga. 25.4 x 0.85
25-36" 900 mm	12' 3.7 m	Two 8 ga. Two 2.7 mm	3/8" 9.5 mm	1" x 20 ga. 25.4 x 1.00
37-50" 1270 mm	12' 3.7 m	—————▶	Two 3/8" Two 9.5 mm	Two 1" x 20 ga. (2) 25.4 x 1.00
10" dn 250 mm dn	12' 3.7 m	—————▶	Two 3/8" Two 9.5 mm	Two 1" x 18 ga. (2) 25.4 x 1.31
10" dn 250 mm dn	12' 3.7 m	—————▶	Two 3/8" Two 9.5 mm	Two 1" x 16 ga. (2) 25.4 x 1.61

NOTES:

1. Straps are galvanized steel; rods are uncoated or galvanized steel; wire is black annealed, bright basic, or galvanized steel. All are alternatives.
2. Tables allow for conventional wall thickness, and joint systems plus one lb/sf (4.89 Kg/m²) insulation weight. If heavier ducts are to be installed, adjust hanger sizes to be within their load limits; see allowable loads with table 4-1. Hanger spacing may be adjusted by special analysis
3. Designers: For industrial grade supports, including saddles, single load trapeze loads, longer spans flange joint loads, see SMACNA's *Round Industrial Duct Construction Standards*.

Job Name: _____

Location: _____

Mechanical Contractor: _____

Job No: _____

Manufacturer: _____

Date: _____



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TABLE 4-1 RECTANGULAR DUCT HANGERS MINIMUM SIZE								
MAXIMUM HALF OF DUCT PERIMETER	Pair at 10 ft. Spacing		Pair at 8 ft. Spacing		Pair at 5 ft. Spacing		Pair at 4 ft. Spacing	
	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD	STRAP	WIRE/ROD
P/2 = 30"	1" x 22 ga.	10 ga. (.135")	1" x 22 ga.	10 ga. (.135")	1" x 22 ga.	10 ga. (.106")	1" x 22 ga.	10 ga. (.106")
P/2 = 72"	1" x 18 ga.	3/8"	1" x 20 ga.	1/4"	1" x 22 ga.	1/4"	1" x 22 ga.	1/4"
P/2 = 96"	1" x 16 ga.	3/8"	1" x 18 ga.	3/8"	1" x 20 ga.	3/8"	1" x 22 ga.	1/4"
P/2 = 120"	1 1/2" x 16 ga.	1/2"	1" x 16 ga.	3/8"	1" x 18 ga.	3/8"	1" x 20 ga.	1/4"
P/2 = 168"	1 1/2" x 16 ga.	1/2"	1 1/2" x 16 ga.	1/2"	1" x 16 ga.	3/8"	1" x 18 ga.	3/8"
P/2 = 192"	Not Given	1/2"	1 1/2" x 16 ga.	1/2"	1" x 16 ga.	3/8"	1" x 16 ga.	3/8"
P/2 = 193" up	SPECIAL ANALYSIS REQUIRED							
WHEN STRAPS ARE LAP JOINED USE THESE MINIMUM FASTENERS: 1" x 18, 20, 22 ga.-two #10 or one 1/4" bolt 1" x 16 ga. -two 3/8" dia. 1 1/2" x 16 ga. -two 3/8" dia. Place fasteners in series, not side by side.				SINGLE HANGER MAXIMUM ALLOWABLE LOAD				
				STRAP			WIRE OR ROD (Dia.)	
				1" x 22 ga. -260 lbs. 1" x 20 ga. -320 lbs. 1" x 18 ga. -420 lbs. 1" x 16 ga. -700 lbs. 1 1/2" x 16 ga. -1100 lbs.	0.106" - 80 lbs. 0.135" - 120 lbs. 0.162" - 160 lbs. 1/4" - 270 lbs. 3/8" - 680 lbs. 1/2" - 1250 lbs. 5/8" - 2000 lbs. 3/4" - 3000 lbs.			

NOTES:

- Dimensions other than gauge are in inches.
- Tables allow for duct weight, 1 lb./sf insulation weight and normal reinforcement and trapeze weight, but no external loads!
- For custom design of hangers, designers may consult SMACNA's Rectangular Industrial Duct Standards, the AISI Cold Formed Steel Design Manual and the AISC Steel Construction Manual.
- Straps are galvanized steel; other materials are uncoated steel.
- Allowable loads for P/2 assume that ducts are 16 ga. maximum, except that when maximum duct dimension (w) is over 60" then P/2 maximum is 1.25 w.
- 12, 10, or 8 ga. wire is steel of black annealed, bright basic, or galvanized type.

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