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TAKE THE TEST

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## Static Regain Ductwork Estimate BASELINE for regions of the country

Using ASHRAE guidelines of 1750 fpm rectangular as equal to spiral round at 3000 fpm can we establish a cost comparison for two ductwork runs at 3.0" wg construction with wrap insulation and standard unit labor hours.

Original Rectangular:	100 ft of 34"x12" duct delivering 4,200 cfm at 1,750 fpm with 3.0" construction with standard trapeze hangers.
Redesign Spiral:	100 ft of 16" round, 26 ga., delivering 4,200 cfm at 3,000 fpm using gripple hangers (aircraft cable)

We want to establish the regional rates for rectangular vs. spiral including the reduced insulation costs for supply ductwork.

1. Your **Estimated Poundage of the original job** where you used Rectangular Ductwork
2. Your **Estimated Poundage of the redesign** using Round Spiral Ductwork
3. Your **Estimated Installed Cost of the original job** where you used Rectangular Ductwork
4. Your **Estimated Installed Cost of the redesign** using Round Spiral Ductwork
5. What is the **difference in poundage** for Round Spiral vs. Rectangular?
6. What was savings **difference in \$\$\$** for 419 SF Insulated Round Spiral vs. 767 SF Rectangular?

NOTE: ASHRAE Duct Classification predicts rectangular 3" wg sealed can achieve class 6 leakage at best for a 4200 cfm system using 1400 sf of supply ductwork (3 cfm/sf of duct). ASHRAE Duct Classification predicts spiral static regain round 3" wg sealed can achieve class 3 for leakage for a 4200 cfm system using 840 sf of supply ductwork (5 cfm/sf duct).

Using Table 7 Leakage as a % of airflow, the rectangular will leak 4.1% (172 cfm) versus the spiral leakage at 1.2% (50 cfm) at 3" but actually at 0.9% (37 cfm) at 2" SP for static regain