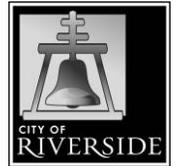


City of Riverside

Building & Safety Division

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❖ CONTRACTOR INFORMATION - RESIDENTIAL HVAC REPLACEMENTS ❖

Effective January 1, 2010 the California Energy Commission requires sealing of conditioned air ducts, refrigerant charge measurement, maximum fan watt draw, and minimum cooling coil airflow. Testing verification by a third-party HERS rater, independent from the installing company, is required for replacing HVAC equipment or certain components.

Testing is required when any of the following occurs:

- Complete HVAC replacement
- Heat Exchanger replacement
- Coil replacement
- Condenser replacement
- Air Handler replacement
- Any time more than 40 lineal feet of duct is added or replaced in unconditioned space

The required CF-1R-ALT forms shall be provided at time of permit application.

REQUIREMENTS

1. For installations that involve the replacements listed above, the measured duct leakage must conform to one of the following requirements:
 - Option # 1: must be less than 15% of fan flow; **or**
 - Option # 2: must be less than 10% of fan flow if to the outside; **or**
 - Option # 3: must be reduced by more than 60% relative to the leakage prior to the installation or replacement of equipment and all accessible leaks must be fixed using a smoke test: **or**
 - Option # 4: if Option # 1, or # 2, or # 3 has been tried, all accessible leaks must be sealed by the contractor using a smoke test. Sampling is prohibited when option # 4 is used.
2. For installed ducts that form an entirely new duct system, the measured leakage must be less than 6% of fan flow.
3. When new, replacement or altered split system air conditioners or heat pumps are installed in existing buildings, correct refrigerant charge must be measured.
4. Temperature Measurement Access Holes (TMAH) – two 5/16 inch drilled holes in the supply and return plenum shall be provided.
5. Saturation Temperature Measurement Sensors (STMS) shall be provided; consisting of permanently installed sensors located on the cooling coil and on the condensing coil.
6. The system installer must provide in the supply plenum a 1/4 inch diameter hole or permanent static pressure probe.
7. The installer must always test their own work and distribute the CF-6R pages to building owner, building department, and the HERS rater.
8. The HERS rater shall perform the required field verifications.
9. The HERS rater is required to distribute the CF-4R pages to owner and the building department and enter the information into the HERS providers web site. The building department cannot final the permit until the appropriate form pages listed above have been received from the installer and the HERS rater.

The HVAC system must be tested in its normal operating condition. Fresh air intakes, economizers, or any other path to the outside must not be temporarily taped or temporarily altered to pass the test.

For more information please contact the California Energy Commission's Efficiency Hotline at (800) 772-3300 or visit their web site at www.energy.ca.gov/title24/changeout.