

Return Grille:

SECTION 233713 – GRILLES

PART 1 – GENERAL

* 1. RELATED DOCUMENTS
1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division \*\* Specifications Sections, apply to this section
	1. SUMMARY
2. Sections Includes:
	1. Return Grille, Heavy-Duty, Stainless Steel
3. Related Sections:
	1. None
	2. SUBMITTALS
4. Product Data: For each type of produce indicated, include the following:
	1. Data Sheet: Indicate materials of construction, finish and mounting details and performance data including throw vertical and horizontal, static pressure, sound ratings.
	2. Source quality-control reports.

PART 2 - PRODUCTS

2.1 GRILLES

1. Architectural square plaque ceiling Grilles
2. Manufacturers: Subject to compliance with requirements and performance listed in section 2.2 Source Quality Control, products by one of following manufacturer is acceptable
	1. Titus (Basis of Design or equivalent)
	2. The Titus 30RL-SS and 33RL-SS Heavy Duty Return Air Grille shall be all stainless steel construction. Model 30R blades are fixed at 0º deflection, model 33R blades are fixed at 45º deflection. Aerodynamic Blades are spaced on 3/4″ centers. Long blade orientation is specified by L and short blade orientation is specified by S.
3. Damper: AG-15-SS Opposed Blade Damper to make return register. The AG-15-SS OBD assures even distribution of air across the grille face, as well as positive volume control..
4. Neck: shall have a minimum of 1-inch depth available for duct connection.
5. Finish: shall be #04 Satin Mill.
6. Optional Paint Finish
	1. The finish shall be Baked Epoxy-Polyester Hybrid Powder
	2. The pencil hardness must be HB to H.
	3. The paint must pass a 100-hour ASTM B117 Corrosive Environments Salt Spray Test without creepage, blistering or deterioration of film.
	4. The paint must pass a 250-hour ASTM D870 Water Immersion Test. The paint must also pass the ASTM D2794 Reverse Impact Cracking Test with a 50-inch pound force applied.
	5. Source Quality Control
7. The manufacturer shall provide published performance data for rated for the square panel Grille
	1. The Grille shall be tested in accordance with ANSI/ASHRAE Standard 70-2006
	2. Throw values are at 20°F cooling temperature delta and
	3. Publish CFM/LF of throw to a terminal velocity 20 fpm and
	4. Horizontal throw Isovels must maintain ceiling adherence with a maximum of 0.91 CFM per linear foot of throw to a terminal velocity of 20 feet per minute, per direction.

PART 3 – EXECUTION

3.1 EXAMINATION

1. Examine areas where Grilles, registers, and grilles are to be installed for compliance with requirements for installation tolerances and other conditions affecting performance of equipment.
2. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

1. Install Grilles flush against surface wall or lay-in ceiling grid module.
2. Verify Grille air patterns are as indicated on drawings during installation.
3. Ceiling-Mounted Inlets: Drawings indicate general arrangement of ducts, fittings and accessories. Air Outlet and locations have been indicated to achieve design requirements for air volume, noise criteria, airflow pattern, throw, and pressure drop. Make final locations where indicated, as much as practical. Where architectural features or other items conflict with installation, notify Engineer for determination of final location.
4. Install grilles with airtight connections to ducts and to allow service and maintenance of dampers, air extractors and fire dampers.

3.3 ADJUSTING

1. After installation, verify air flow and volume adjustment if supplied with opposed blade damper as indicated on drawings, or as directed before starting air balance.

END OF SECTION 233713