

TM-2™ and TM-4™

Gasket Seal and Gel Seal Ducted, Disposable Ceiling Filter Modules

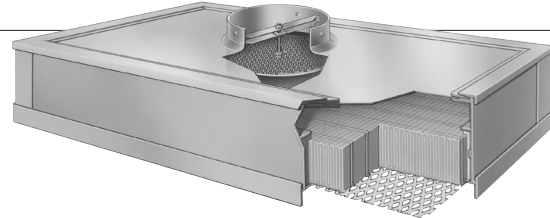
INSTALLATION, OPERATION, AND MAINTENANCE INSTRUCTIONS



Gasket Seal Installation – TM-2 and TM-4

The TM Series Disposable Ceiling Filter Modules are unique factory-assembled and tested units, incorporating a HEPA or ULPA filter media pack, damper-diffuser, an optional faceguard, and integral round duct connection. They are made with an anodized aluminum housing that is compatible with gasketed T-Bar ceiling grids.

1. Before beginning installation of any HEPA or ULPA filter module, the system should be cleaned and blown down with both roughing filters and prefilters in place. This is essential to minimize the initial quantity of particulate that might be drawn into the filter modules.
2. Carefully remove each bagged module from its shipping carton just before installation. Remove the poly bag at the point of installation and inspect the filter face for shipping damage. Carefully scrutinize each unit before installation. Avoid accidentally damaging the delicate filter media while handling the filter. (Gloves are recommended to comply with some protocol requirements.)
3. The TM-2 and TM-4 units are equipped with four hanger support points for independently suspending the modules. Local codes, rigidity of the ceiling system, or owner preference will determine the use of hangers. These hangers are available only on the gasket version.
4. AAF Flanders recommends that the modules be sealed airtight against the ceiling grid. This may be accomplished by using pressure-sensitive gasketing, caulking, or non-hardening tape sealant. This is a design decision, dependent upon room performance requirements.
5. When connecting the flexible round duct to the module collar, avoid excessive slack in the duct. Where practical, set the housing in place, then connect the round duct to the collar. Drawbands must be positioned below the dimples in the collar to prevent slippage or blowoff of the duct connection. Stainless steel, wormgear-type drawbands are recommended.



Gel Seal Installation – TM-2 and TM-4

TM-4 Disposable Ceiling Filter Modules are unique factory-assembled and tested units, incorporating a HEPA or ULPA filter media pack, damper-diffuser, optional faceguard, and integral round duct connection. They are made with an anodized aluminum housing that is compatible with gel seal grid systems.

1. Before beginning installation of any HEPA or ULPA filter module, the system should be cleaned and blown down with both roughing filters and prefilters in place. This is essential to minimize the initial quantity of particulate that might be drawn into the filter modules.
2. Carefully remove each bagged module from its shipping carton just before installation. Remove the poly bag at the point of installation and inspect the filter face for shipping damage. Carefully scrutinize each unit before installation. Avoid accidentally damaging the delicate filter media while handling the filter. (Gloves are recommended to comply with some protocol requirements.)
3. Inspect the knife edge seal around the perimeter of the module for damage.
4. Set the module down into the gel seal grid. Check to be sure the knife edge on the module penetrates into the gel in the channel on all four sides to form an airtight seal. No latches are required. The weight of the module sets the unit into the gel seal grid.
5. When connecting the flexible round duct to the module collar, avoid excessive slack in the duct. Where practical, set the housing in place, then connect the round duct to the collar. Drawbands must be positioned below the dimples in the collar to prevent slippage or blowoff of the duct connection. Stainless steel, wormgear-type drawbands are recommended.

TM-2™ and TM-4™ Ceiling Filter Modules

Operation

Once in position, the modules may be balanced and tested.

1. Adjust the main air supply duct system for total design air volume before attempting to balance any of the filter modules.
2. On units equipped with an adjustable damper-diffuser, access by removing the well nut plug and inserting a #4 Phillips screwdriver.
3. On units equipped with an adjustable damper-diffuser, adjust as required in conjunction with the system branch duct damper to provide the desired air volume.

NOTE: The adjustable disc type damper-diffuser is a trim device and is not intended to induce a large pressure drop.

4. Reinstall the well nut plug into the diffuser adjustment port.
5. Determine the actual total air volume (in CFM) through each module by using a soft balancing hood equipped with a velometer.

Testing

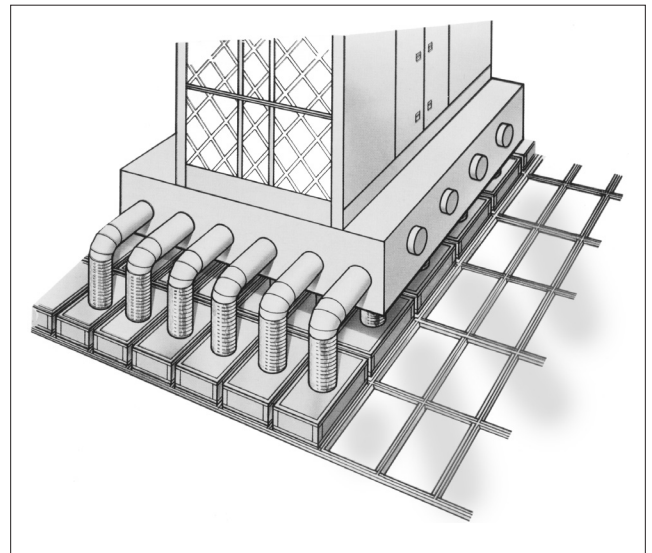
1. The modules may be leak tested in place.
2. AAF Flanders does not recommend introducing a challenge aerosol through the port in the face of the filter. The $\frac{7}{16}$ " diameter port is too small for proper mixing, and the challenge aerosol may condense on the diffuser plate, eventually dripping down onto the media pack.

NOTE: The same port is used for both diffuser adjustment and for insertion of a probe to measure the contamination level of the supply air.
3. AAF Flanders recommends that the challenge aerosol be introduced into the ductwork at least ten duct diameters upstream from the module, or preferably into the fan intake. The port in the face of the filter may be used to check the contamination level of the supply air at any time.
4. Your AAF Flanders representative can offer several alternative suggestions and techniques on testing. Contact AAF Flanders Customer Service toll free at 877.228.7007 for assistance.

Maintenance

TM Series modules need no maintenance. When installed downstream of a good system of AAF Flanders prefilters (90% AHSRAE efficiency recommended), they should provide years of service.

A periodic (annual) check of airflow is recommended. The modules should be changed when the desired airflow is no longer achieved due to accumulated dirt buildup on the filters, which increases resistance. Discard the entire module and replace with new units.



Typical TM module installation



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ISO Certified Firm AFP-3-475D 01/17