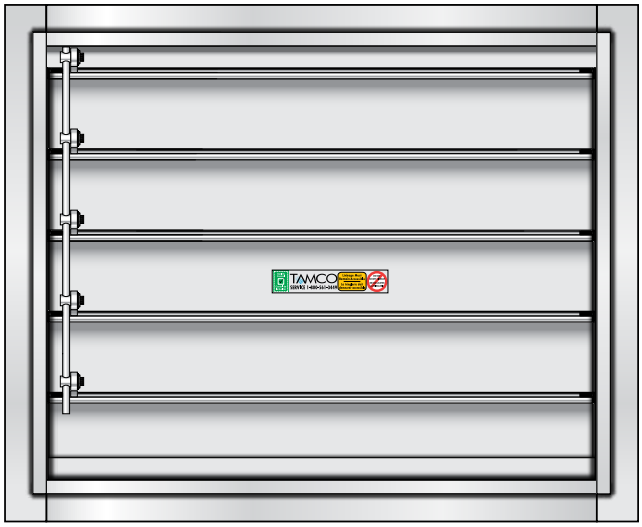
TAMCO BACK DRAFT DAMPER
INSTALLATION GUIDELINES

FRONT VIEW



BACK VIEW

GENERAL INSTALLATION NOTES

- Back draft dampers must be kept clean and dry. Store indoors to protect from dirt, dust and weather. Do not store at temperatures in excess of 100°F (38° C).
- Do not stack back draft dampers on top of or against each other.
- Back draft dampers are to be handled and lifted by the frames only. Do not use the blades or linkage to lift back draft dampers.
- Do not drop, drag or twist.
- Multiple-section assemblies will require sufficient people and appropriate rigging to lift units safely and without causing damage.
- Ensure that the opening or duct work is free of any obstructions and is adequately supported, so that damper performance is not adversely affected.
- The system must support the damper. The damper cannot support the system. Do not use the damper to square up duct. The opening must be plumb, straight, level, square, and sized correctly for the back draft damper.
- The back draft damper must not be twisted, compressed or stretched to fit the opening. Once installed, the blades must be free to move without binding. Use shims between the damper frame and the opening to prevent distortion or stretching of the back draft damper.
- When installing fasteners *(provided by others)*, they should be located so as not to interfere with blade operation.
- Consult engineering plans prior to installation to confirm airflow direction.
- TAMCO recommends that back draft dampers be installed at a minimum distance of one (1) fan diameter away from the fan, for custom air handler exhaust applications. AMCA 200 and AMCA 201 recommend a distance of one (1) duct diameter for each 1000 fpm in order to acheive uniform air at the back draft damper. The type of fan and distance allowed between the fan and the damper will determine the air velocity profile the back draft damper will be subjected to.
- When back draft dampers are installed in the vertical plane, blades must always be horizontal.
- Series 7000 and 7000 WT and 7000 CW Back Draft Damper can be installed in the vertical plane (Airflow Horizontal), or in the horizontal plane (Airflow Up).
- Only Series 7000 CW Counterweighted Back Draft Dampers can be installed in the horizontal plane with Airflow Down.

DO NOT ADJUST LINKAGE MECHANISM. IF PROBLEM STILL EXISTS AFTER VERIFICATION AND CORRECT ACTION, CALL TAMCO CUSTOMER SERVICE.

TAMCO's all-aluminum back draft dampers are constructed with maintenance-free bearing and linkage components.

Caution: Never use any lubricants, such as grease or silicone, on TAMCO back draft dampers.

In applications where the humidity level is unusually elevated, or where there are high levels of dust and dirt particles, TAMCO recommends that the back draft damper blades and seals should be wiped clean periodically. In addition, the linkage and bearing system should be cleaned once a year. This can be done easily with the use of a domestic-strength steam cleaner. The loosened dirt and water droplets can then be blown out with compressed air.

CALL TAMCO CUSTOMER SERVICE WITH ANY QUESTIONS CONCERNING TAMCO BACK DRAFT DAMPERS

1-800-561-3449

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VERIFY BEFORE INSTALLATION!

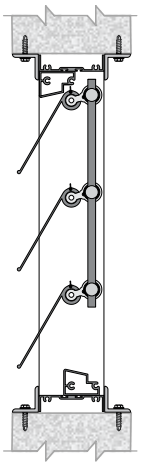
- ✓ Before installing, inspect damper for possible damage caused in shipping.
- ✓ If minor damage has occurred to frame corners or flanges, correct by bending or hammering back into position. Ensure correct realignment of repair, as bent or twisted frames might not mate properly with mounting angles, or additional damper sections.
- ✓ Do not install damper if damage is more than superficial, if uncertain as to extent of damage, or if damper does not operate correctly.

  Call TAMCO CUSTOMER SERVICE at 1-800-561-3449.
- ✓ Compare items listed on packing list with materials received to ensure all parts of the shipment, including accessories, are accounted for.

INSTALLATION OF DAMPER TYPES

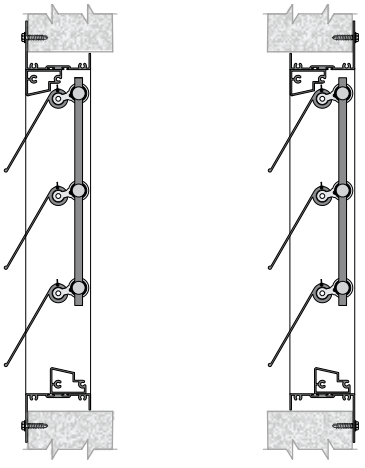
IN DUCT MOUNT TYPE

- Verify that back draft damper is square.
- Back draft damper is approximately ¼" (6.4 mm) smaller than specified duct size.
- Insert entire back draft damper into opening. Bottom of damper frame must sit flat on floor of duct to prevent twisting, sagging, or bumping up.
- Install single-section units using mounting clips or angles. Arrange clips (angles) snugly against the perimeters of the front and back damper frames, securing clips (angles) to duct work. *(TAMCO recommends that the clips (angles) should be fastened to the duct work only and not to the back draft damper. This will prevent the fasteners from binding or twisting the damper.)*
- If access to both sides of the back draft damper is limited, install clips (angles) to the duct work around the perimeter of either the front or the back frames. Then secure the clips (angles) to the damper frame.
- TAMCO recommends that a minimum of two fasteners per frame length be used (top, bottom, left and right). Fasteners should be spaced at 12" (305 mm) to 15" (381 mm) oc.
- Caulk all joints.



FRONT OR REAR FLANGE MOUNT TYPES

- Verify that back draft damper is square.
- Inserted portion of back draft damper is approximately ¼" (6.4 mm) smaller than specified duct size.
- Ensure that the substrate the back draft damper will be attached to is flat and level.
- Place single-section units directly on wall or floor. Secure back draft damper's flange to substrate using appropriate fasteners.
- Pre-drill fastener holes in the back draft damper flange, before placing over opening, to reduce twisting and binding.
- TAMCO recommends that a minimum of two fasteners per frame length be used (top, bottom, left and right). Fasteners should be spaced at 12" (305 mm) to 15" (381 mm) oc.
- Do not overtighten fasteners to substrate. Doing so may damage or twist the back draft damper, which will increase air leakage.
- Caulk all joints.



Front Flange Rear Flange

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INSTALLING MULTI-SECTION BACK DRAFT DAMPERS

STRUCTURAL SUPPORT REQUIREMENTS

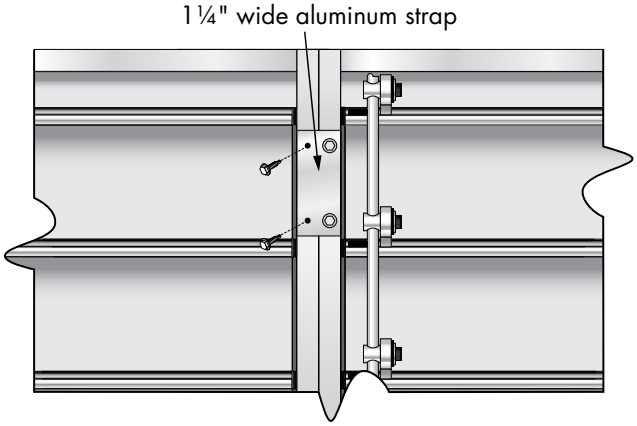
- Field-supplied, intermediate structural support is required to resist applied pressure loads for back draft dampers that are two or more sections high or wide.
- Angle bracing installed at multi-section joints will prevent bowing and twisting of back draft damper units.
- TAMCO Series 7000 Back Draft Damper weighs approximately 2 lbs/ft². TAMCO Series 7000 WT and 7000 CW Back Draft Dampers weight approximately 3 lbs/ft².

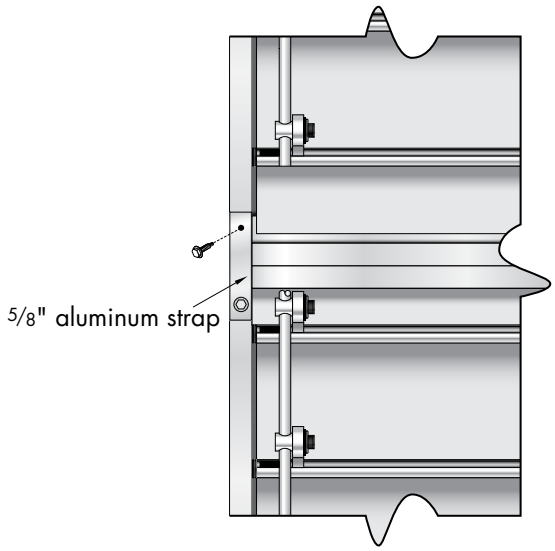
MULTI-SECTION BACK DRAFT DAMPER ASSEMBLIES

- Sections may be installed in or over its own field-supplied support structure individually, or they may be field-assembled prior to installation.
- If field-assembly is required before installation, lay dampers on a flat surface *(such as a floor)* with TAMCO label facing upwards to assemble sections.

TWO OR MORE SECTIONS WIDE

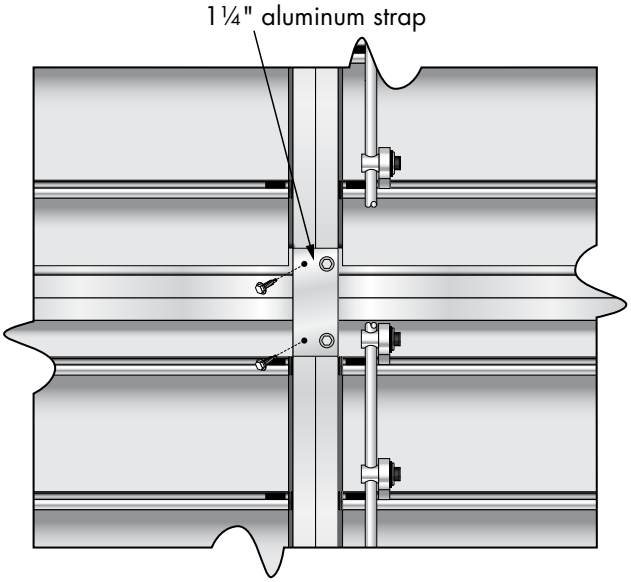
- Ensure that all sections are straight, even, and aligned with each other.
- Apply one 1¼" (32 mm) wide strap at the head and/or sill at each joint, where back draft damper sections meet. Aluminum straps are to be installed on the back (sticker) side of the dampers.
- Fasten aluminum straps to damper frames using #8 x ½" Tek screws. *(Straps and screws are shipped with all multi-section back draft dampers in a zip lock bag.)*





TWO OR MORE SECTIONS HIGH

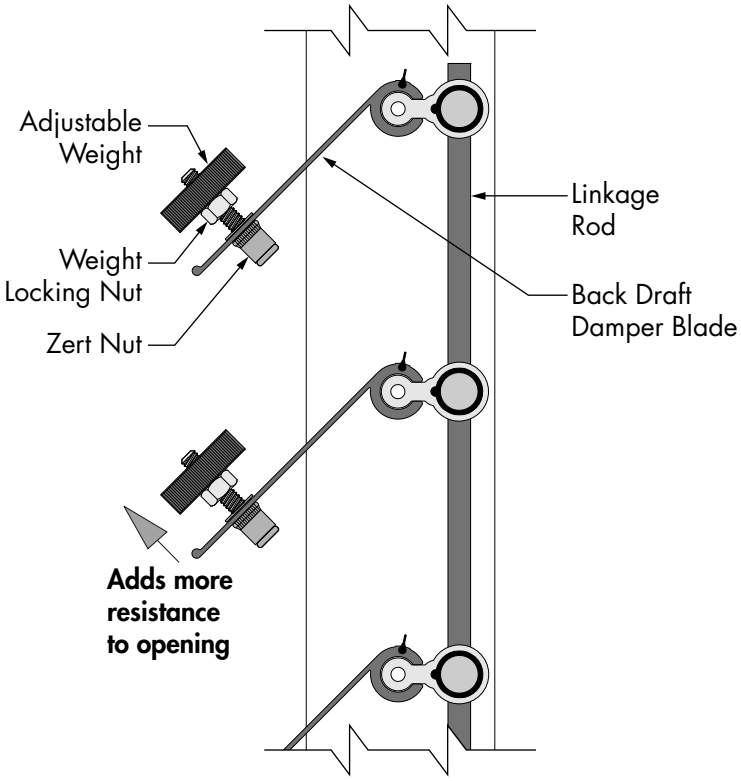
- Ensure that all sections are straight, even, and aligned with each other.
- Apply one 5/8"(16 mm) wide strap at each joint, where top and bottom sections meet. Aluminum straps are to be installed on the back (sticker) side of the dampers.
- Fasten aluminum straps to damper frames using #8 x ½" Tek screws. *(Straps and screws are shipped with all multi-section back draft dampers in a zip lock bag.)*



MULTIPLE SECTIONS WIDE BY MULTIPLE SECTIONS HIGH

- Ensure that all sections are straight, even, and aligned with each other.
- Apply one 1¼" (32 mm) wide strap at each joint, where top, bottom, left and right sections meet. Aluminum straps are to be installed on the back (sticker) side of the dampers.
- Fasten aluminum straps to damper frames with ½" Tek screws. *(Straps and screws are shipped with all multi-section back draft dampers in a zip lock bag.)*

SERIES 7000 WT & 7000 CW
WEIGHT ADJUSTMENT

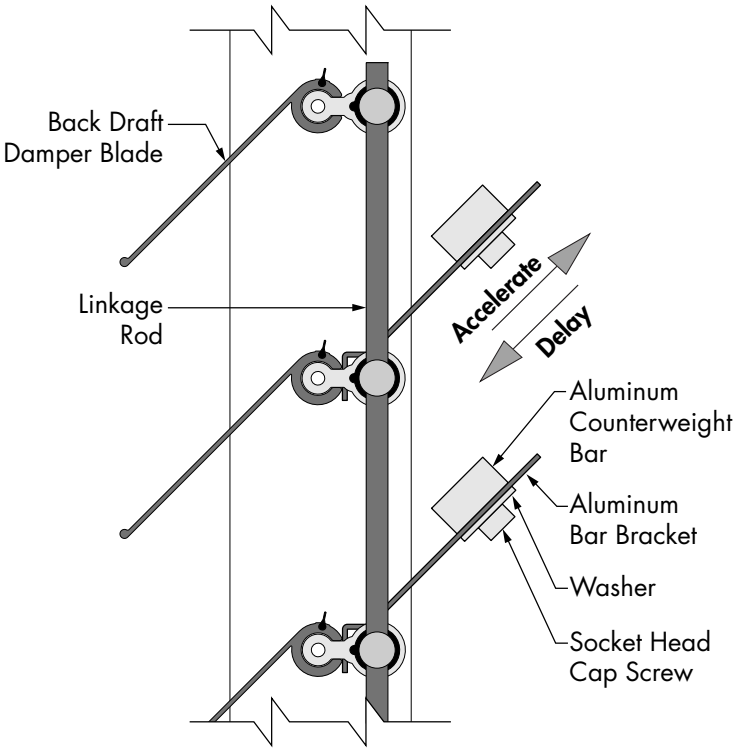


SERIES 7000 WT

- Series 7000 WT Weighted Back Draft Dampers have a round, adjustable weight and a threaded post secured to the center of each blade. A zert nut on the back of the blade is used to lock the threaded post in place.
- Each cylindrical, steel weight measures 1¼" (32 mm) in diameter.
- Weights are supplied, so that the required resistance to the opening of the blade against air flow can be achieved.
- The cylinder can be adjusted away from or towards the blade, as far as the threaded post will allow.
- Moving the weight way from the blade will increase the amount of additional pressure and airflow required to open the back draft damper blades.
- Moving the weight closer to the blade will decrease the amount of additional air pressure and airflow required to open the back draft damper blades.
- Additional weights may be added to increase the desired pressure build-up before the back draft damper begins to open.
- Adjust weight placement until desired pressure build-up is achieved. *(Several re-adjustments may be necessary for desired operation.)*
- Once adjustment is completed, tighten the weight locking nut to prevent weight from moving out of position.

SERIES 7000 CW

- Series 7000 WT Counterweighted Back Draft Dampers have an adjustable ¾" wide (19 mm) aluminum, counterweight bar attached to the back of the blades *(with the exception of the top blade)*.
- The aluminum bar brackets centered along the length of the blade. This is designed to apply even pressure across each blade. Do not move the bar bracket away from the factory-aligned center of the blade.
- Counterweights can be set to relieve air pressure differentials less than .01 in. w.g. (3 Pa).
- To accelerate blade opening, move the aluminum counterweight bar further away from the blade.
- To delay blade opening, move the aluminum counterweight bar closer to the blade.
- To move the aluminum counterweight bar, first loosen the two socket head cap screws with a 3/16" (4.8 mm) Allen/Hex wrench. Do not remove the screws. *(The socket head cap screws secure the aluminum counterweight bar in place, through the washer and the aluminum bar bracket.)*
- Slide the aluminum counterweight bar in the direction required to achieve desired blade operation. The counterweight bars should be adjusted to the same location on each blade, to ensure that even pressure is applied across the entire back draft damper. *(Several re-adjustments may be necessary. Keep in mind that depending on external conditions and damper size, moving the aluminum bar to the furthest point away from the blade might prevent the back draft damper from closing.)*
- Once adjustment is completed, re-tighten socket head cap screws.



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