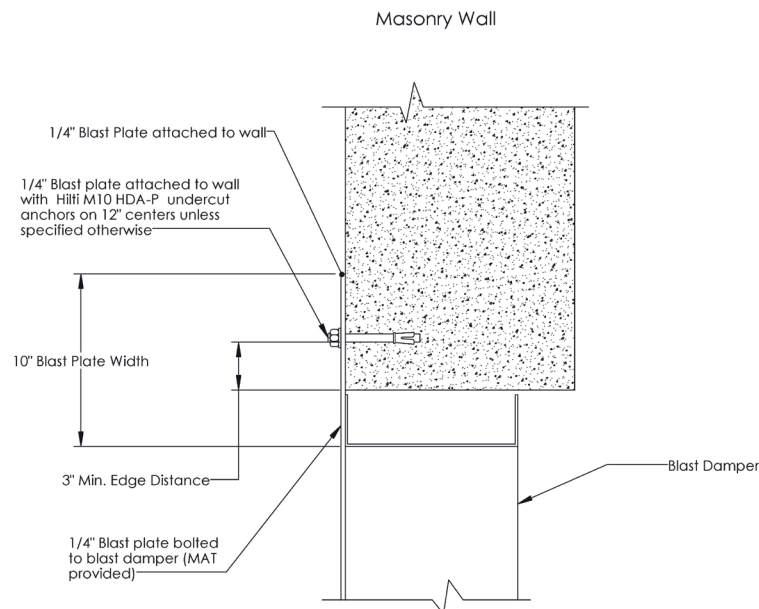


Models BL-201/BL-201-GR Blast Protection Damper Installation Instructions

Concrete Support Structure

- HILTI HDA-P M10 undercut anchors are the specified anchor for attachment of blast damper to concrete. Unless otherwise directed by MAT, equivalent anchors from other suppliers may also be used.
- Attachment to be made on the blast protection side.
- Concrete substrates may vary widely from engineering specifications; Site specific engineering may be required.
- Drill holes with rotary impact hammer drills using carbide-tipped bits, hollow drill bit system, or core drills using diamond core bits. Drill bits shall be of diameters as specified by the anchor manufacturer. Unless otherwise shown on the Drawings, all holes shall be drilled perpendicular to the concrete surface.
- Cored Holes: Where anchors are permitted to be installed in cored holes, use core bits with matched tolerances as specified by the anchor manufacturer. Properly clean cored hole per anchor manufacturer's instructions.
- Embedded Items: Identify position of reinforcing steel and other embedded items prior to drilling holes for anchors. Exercise care in coring or drilling to avoid damaging existing reinforcing or embedded items. Notify the Engineer if reinforcing steel or other embedded items are encountered during drilling. Take precautions as necessary to avoid damaging pre-stressing tendons, electrical and telecommunications conduit, and gas lines.
- Base Material Strength: Unless otherwise specified, do not drill holes in concrete or masonry until concrete, mortar, or grout has achieved full design strength.
- Perform anchor installation in accordance with anchor manufacturer instructions. HILTI HDA-P M10 anchors shall be installed to HILTI specifications detailed in HILTI document #401674 A5-08.2015
- Undercut Anchors: Protect threads from damage during anchor installation. Heavy-duty sleeve anchors shall be installed with sleeve fully engaged in part to be fastened. Set anchors to anchor manufacturer's recommended torque, using a torque wrench. If using HILTI HDA-P M10 anchors - Following attainment of 10% of the specified torque, 100% of the specified torque shall be reached within 7 or fewer complete turns of the nut. If the specified torque is not achieved within the required number of turns, the anchor shall be removed and replaced unless otherwise directed by the Engineer.
- Dampers are manufactured to order for a specified wall opening, care must be taken that critical dimensional constraints for expansion anchors in concrete exist and may be violated by placing the damper into a wall opening size not specified in approved drawings.
- Where applicable use a template to position and drill anchor holes.



Models BL-201/BL-201-GR Blast Protection Damper Installation Instructions

Metal/Steel Support Structure

- Where blast damper are specified to be mounted to steel structural members, the specified anchors shall be 304 Stainless steel or galvanized heavy hex bolts and nuts or approved expansion anchors.
- Where possible, structural member requiring blind or hard to reach joints shall use approved expansion bolts designed for steel structural joints.
- Where applicable, structural members may be tapped for a direct bolted joint, provide member being tapped is 1.5-2 times thicker than the diameter of fastener.
- Damper shall not be riveted to steel structural members.
- Heavy-hex nuts should meet the requirements of ASTM A563 (Grade DH; galvanized and lubricated) or ASTM A194 (Grade 2H; galvanized and lubricated). Heavy-hex nut dimensions should meet the requirements of ANSI/ASME B18.2.6. Flat galvanized circular washers should meet the requirements of ASTM F436. Washers should be used under the nut. If the bolt head is to be turned during the tightening procedure, then a washer should also be provided under the head. Lock washers should never be used with high strength bolts. For oversized holes, plate washers 8 mm (5/16 inch) should be used rather than flat washers. Plate washers should be structural grade steel and should be galvanized, if used with galvanized fasteners.
- Compressible-washer-type, direct-tension indicators should meet the requirements of ASTM F959. When the direct-tension-indicator (DTI) is used under the nut, an ASTM F436 washer should be placed between the bolt and the direct-tension indicator. When the direct-tension-indicator is used under the bolt head, an ASTM F436 washer is required under the DTI when the DTI is placed on an oversized hole and between the bolt head and the DTI when the bolt head is the turned element.
- The bolt length used in a connection should be such that the end of the bolt is flush with or projecting beyond the face of the nut when properly installed.
- Nuts and washers should match the steel type of the bolt or fastener. Stainless fasteners should conform to the requirements of ASTM F593, "Standard Specification for Stainless Steel Bolts, Hex Cap Screws, and Studs" and ASTM F594 "Standard Specification for Stainless Steel Nuts."
- Proper consideration should be given to contact between galvanically dissimilar metals.

