



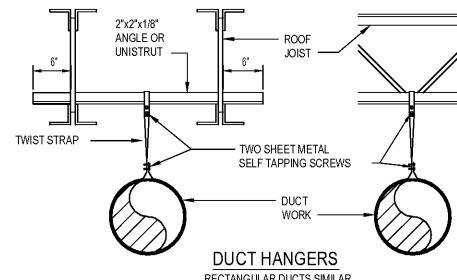
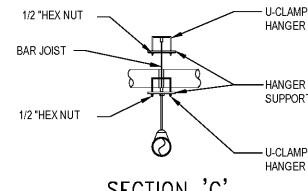
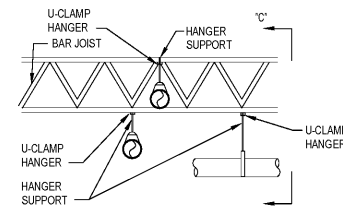
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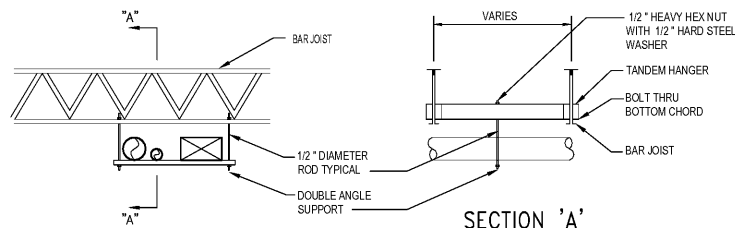
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LOAD APPLICATIONS
(PERPENDICULAR AND PARALLEL TO BAR JOISTS)

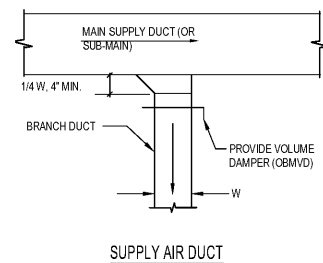


LOAD APPLICATIONS
(PERPENDICULAR AND PARALLEL TO BAR JOISTS)

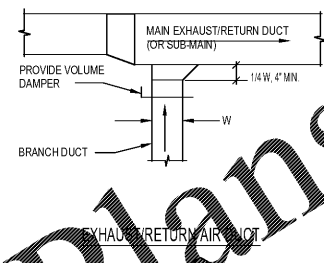
HANGER DETAIL NOTES:
THE FOLLOWING GUIDELINES SHALL BE FOLLOWED WHEN ATTACHING ITEMS TO BAR JOISTS:

- DO NOT HANG ANY TYPE OF CRANE OR HOIST FROM BAR JOISTS.
- OBTAIN CONCENTRATED LOADS FROM CERTIFIED EQUIPMENT DRAWINGS AND MANUFACTURER'S DATA.
- DO NOT HANG ANY LOAD OVER 50 POUNDS FROM JOIST BRACERS.
- DO NOT HANG ANY LOADS OVER 50 POUNDS FROM THE TOP OR BOTTOM CHORD OF A BAR JOIST BETWEEN JOINTS. ALWAYS HANG OVER A DIAGONAL-TO-CHORD JOINT.
- DO NOT DRILL OR WELD ANY PART OF THE BAR JOIST.
- DO NOT HANG ANY LOAD OVER 50 POUNDS FROM ONE SIDE OF THE JOIST CHORD. THIS ECCENTRICITY CAN SERIOUSLY IMPAIR THE MEMBER'S STRUCTURAL PERFORMANCE.
- DO NOT HANG LOAD GREATER THAN 1000 POUNDS FROM ONE JOIST BECAUSE OF HANGER DEFICIENCY. HANG BETWEEN TWO JOISTS TO CONTRIBUTE THE LOAD AND GIVE A STRONGER, MORE STABLE HANGING SYSTEM.
- DO NOT HANG ANY LOAD OVER 50 POUNDS LINEAR FOOT CONTINUOUSLY ALONG ONE BAR JOIST UNLESS THAT JOIST IS CAPABLE OF CARRYING THE APPLIED LOAD IN ADDITION TO THE REQUIRED BUILDING LIVE LOAD.
- COORDINATE HANGER LOADS WITH THE GENERAL CONTRACTOR CONSTRUCTION MANAGEMENT.
- LOCATION OF HANGER LOADS SHALL BE APPROVED BY GENERAL CONTRACTOR.
- ALL DUCTS & SUPPORTS PER SMACNA STANDARDS.

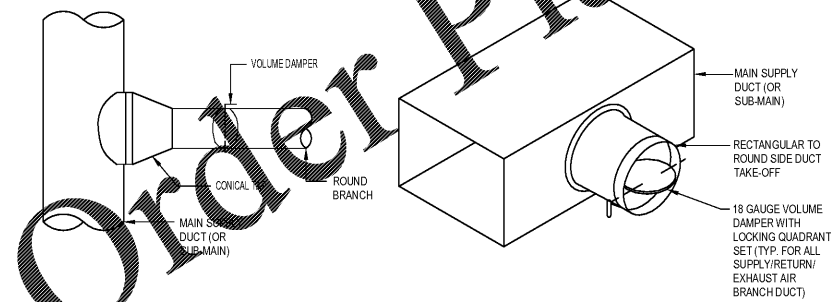
1 HANGER DETAILS
M4 SCALE: NO SCALE



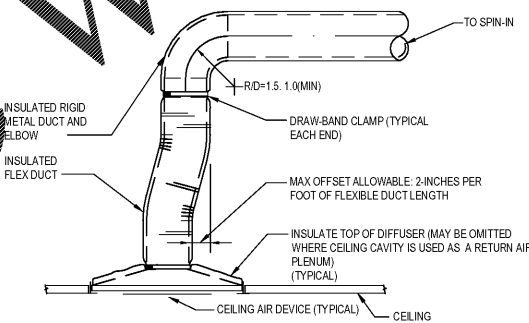
SUPPLY AIR DUCT



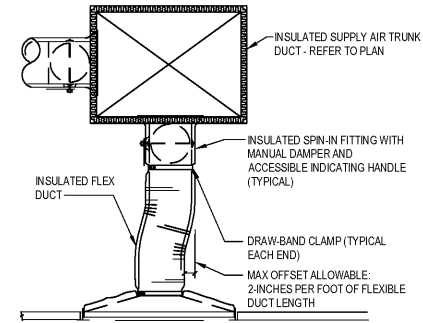
EXHAUST/RETURN AIR DUCT



2 BRANCH TAKE-OFF DETAIL
M4 NOT TO SCALE



LONG RUN, SIDE TAP INSTALLATION



BOTTOM TAP INSTALLATION

DETAIL NOTES

- TWO INSTALLATION OPTIONS ARE SHOWN. PROVIDE THE MOST SUITABLE OPTION BASED UPON ACTUAL DUCT LAYOUT, DIFFUSER LOCATION, AND FIELD CONDITIONS. WHERE FLEXIBLE DUCT RUN EXCEEDS THE MAXIMUM ALLOWABLE LENGTH, PROVIDE THE LONG RUN, SIDE TAP INSTALLATION.
- FLEXIBLE DUCT: U.L. LISTED CLASS 1 AIR DUCT, TESTED IN ACCORDANCE WITH U.L. 181. MAXIMUM LENGTH ALLOWED IS 5 FEET.
- SPIN-IN FITTING: FLARED TYPE WITH BUTTERFLY DAMPER AND INDICATING HANDLE. PROVIDE STRAIGHT-IN TYPE SPIN-IN FITTING ONLY WHERE TRUNK DUCT SIZE WILL NOT ALLOW THE INSTALLATION OF A FLARED TYPE FITTING. INSTALL DUCT INSULATION SO THAT DAMPER HANDLE IS ACCESSIBLE AND VISIBLE ON THE BOTTOM OR SIDE OF THE SPIN-IN FITTING.
- PROVIDE ACCESS TO DAMPERS LOCATED IN CEILINGS OTHER THAN LAY-IN TYPE CEILINGS.
- PROVIDE MINIMUM LENGTH OF FLEXIBLE DUCT WITH NO EXCESS LENGTH BETWEEN CONNECTION POINTS. INSTALL FULLY EXTENDED, NOT COMPRESSED.
- EXTEND FLEXIBLE DUCT A MINIMUM LENGTH OF ONE DUCT DIAMETER STRAIGHT FROM CONNECTION POINTS BEFORE BENDING. MAKE SMOOTH BENDS WITHOUT DEFORMING DUCT CROSS-SECTION.
- PROVIDE ROUND-TO-RECTANGULAR INSULATED SHEET METAL TRANSITION AT THE NECK OF THE CEILING AIR DEVICE AS NECESSARY FOR RECTANGULAR NECK DIFFUSERS/GRILLES.
- SUPPORT FLEXIBLE DUCT AS RECOMMENDED BY MANUFACTURER USING A MINIMUM OF 1-1/2 INCH WIDE BAND CLAMP. MAXIMUM HANGER SPACING IS 4 FEET WITH A MAXIMUM PERMISSIBLE SAG OF 1/2-INCH PER FOOT BETWEEN SUPPORTS. HANGERS MUST MAINTAIN ROUND DUCT SHAPE.

3 CEILING DIFFUSER/RETURN GRILLE CONNECTION DETAIL
M4 NOT TO SCALE