

- NOTES:
1. ALL VANE ELBOWS SHALL BE CONSTRUCTED AND INSTALLED AS DETAILED BY SMACNA.
 2. WHEN W1 DOES NOT EQUAL W2, VANE SHALL BE SINGLE THICKNESS VANE TYPE REGARDLESS OF W DIMENSION.
 3. ALL SINGLE THICKNESS VANES SHALL HAVE A 2" RADIUS, 1 1/2" MAXIMUM SPACE BETWEEN VANES AND A 3/4" TRAILING EDGE.
 4. WHEN W EQUALS W2 AND W1 IS GREATER THAN 20", VANES SHALL BE DOUBLE VANE TYPE.

The diagram illustrates the process of replacing a steam valve on an existing convector. It is divided into two main sections: 'REMOVALS' and 'NEW WORK'.

REMOVALS: This section shows the existing setup to be removed. It includes a 'REMOVE EXISTING SELF-CONTAINED NON-ELECTRIC CONTROL VALVE. PATCH CONVECTOR COVER AS REQUIRED.' and an 'EXISTING CONVECTOR COVER TO REMAIN'. The 'EXISTING STEAM HEATING ELEMENT TO REMAIN' is shown with a '0.75" LPS(5)' connection. An 'EXISTING STEAM TRAP TO REMAIN' is also indicated. The 'EXISTING FLOOR SLAB' is shown with a '0.75" LPS(5)' connection. The 'REMOVE EXISTING SECTION OF STEAM PIPING AND SPECIALTIES FOR INSTALLATION OF NEW CONTROL VALVE, STRAINER, UNION, ETC.' is shown with a '0.75" LPS(5)' connection.

NEW WORK: This section shows the new installation. It includes 'PROVIDE NEW PIPING WHERE CONTROL VALVE WAS REMOVED. SIZE TO MATCH EXISTING.' and an 'EXISTING CONVECTOR COVER TO REMAIN'. The 'EXISTING STEAM HEATING ELEMENT TO REMAIN' is shown with a '0.75" LPS(5)' connection. An 'EXISTING STEAM TRAP TO REMAIN' is also indicated. The 'EXISTING FLOOR SLAB' is shown with a '0.75" LPS(5)' connection. The 'EXTEND CONTROL VALVE WIRING OVER AND UP THRU NEW WALL' is shown with a '0.75" LPS(5)' connection.

TYPICAL STEAM VALVE REPLACEMENT FOR EXISTING CONVECTORS

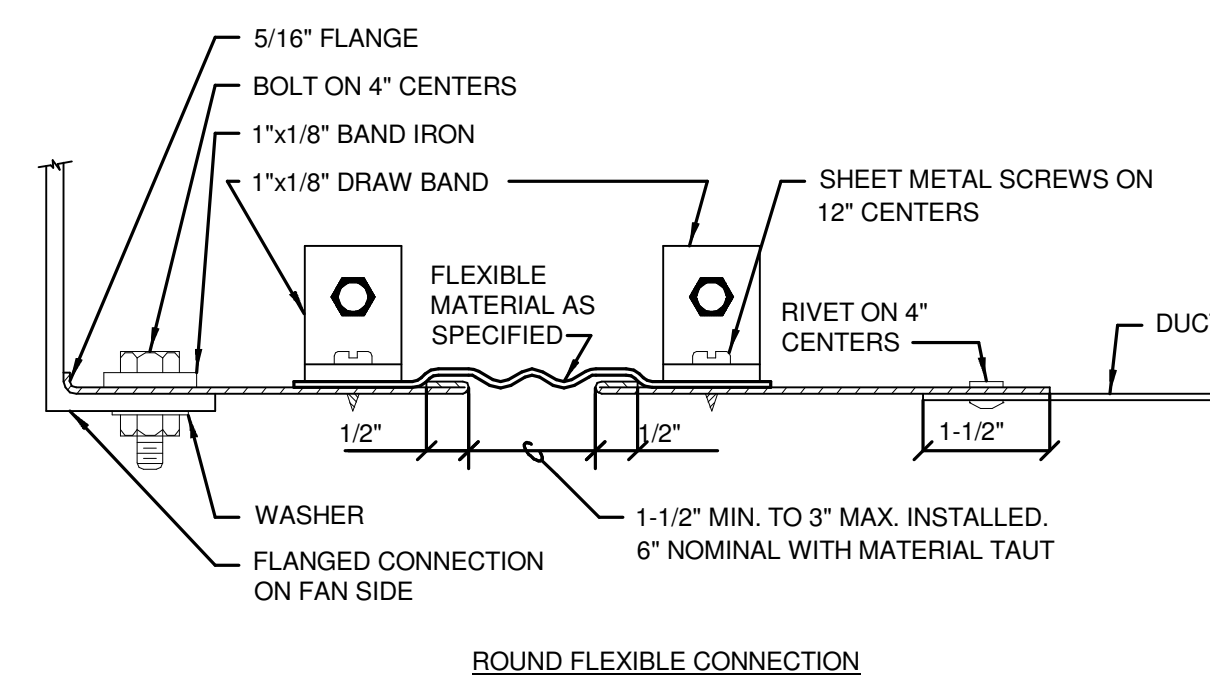


Diagram illustrating the components and specifications for a typical diffuser or register in lay-in ceiling:

- SEE SPECIFICATIONS FOR CLAMPS AND SEALANT (TYP.)
- SUPPORT SADDLE FROM STRUCTURE
- FLEXIBLE DUCT SIZE SAME AS DIFFUSER INLET; 5'-0" MAX LENGTH
- USE RIGID ELBOWS FOR CHANGE OF DIRECTION GREATER THAN 45°
- THERMAL INSULATION SEE SPECIFICATIONS
- 12"
- SHEET METAL SADDLE
- VOLUME DAMPER W/ LOCKING QUAD
- CEILING
- TYPICAL DIFFUSER OR REGISTER IN LAY-IN C.E.S.
- CONICAL OUTLET
- BRANCH DUCT
- THERMAL INSULATION SEE SPECIFICATIONS

<u>NOTES:</u>	<u>WITH ONE VANE</u>	<u>WITH TWO VANES</u>
1. THE INTERIOR SURFACE OF ALL RADIUS ELBOWS SHALL BE MADE ROUND.		
2. ALL STANDARD RADIUS ELBOWS CAN BE SUBSTITUTED WITH SHORT RADIUS ELBOWS. ALL SHORT RADIUS ELBOWS SHALL HAVE VANES. VANES SHALL BE CONSTRUCTED, SUPPORTED AND FASTENED AS RECOMMENDED BY SMACNA		

TYPICAL DUCTWORK TRANSITION WITH EQUIPMENT MOUNTED IN DUCT
PLAN OR SIDE VIEW

TYPICAL DUCTWORK TRANSITION
PLAN OR SIDE VIEW

NOTE:
UNLESS OTHERWISE INDICATED ON PLANS, MAXIMUM ANGLES SHOWN SHALL APPLY

The diagram illustrates two methods for connecting a branch duct to a main supply duct.


AIR SPLIT DUCT TAKE-OFF PLAN VIEW: This view shows a main supply duct with air flow indicated by an arrow. A square elbow is shown where a branch duct (supply register or branch duct) connects. A manual volume damper is located in the branch duct. A square elbow is also shown where the branch duct connects back to the main supply duct. Labels include: TURNING VANES, SEE FLOOR PLAN FOR SPLIT DIMENSION, MAIN SUPPLY DUCT, AIR FLOW, SQUARE ELBOW SHOWN, PROVIDE ROUND ELBOW WHEN SHOWN ON PLANS, SUPPLY REGISTER OR BRANCH DUCT, AIR SPLIT DUCT TAKE-OFF PLAN VIEW, and MANUAL VOLUME DAMPER.

BRANCH DUCT TAKE-OFF PLAN VIEW: This view shows a main supply duct with air flow indicated by an arrow. A branch duct is connected to the main supply duct using a 1/4 W or 4" MIN. connection. A manual volume damper is located in the branch duct. Labels include: AIR FLOW, 1/4 W OR 4" MIN., MAIN SUPPLY DUCT, MANUAL VOLUME DAMPER, and BRANCH DUCT.

Diagram illustrating a rectangular duct system configuration. The system includes a main duct with a 90-degree turn, a return/exhaust duct, and a CFI (Constant Flow Inlet) device. Key components and labels include:

- SPIN-IN BRANCH TAP FITTING WITH MANUAL DAMPER**: Located at the top of the main duct.
- ROUND DUCT - NOTE 2**: The duct section before the turn.
- RECTANGULAR DUCT, NOTE 1**: The main duct section.
- STRAP HANGER**: Two locations, one at the top of the main duct and one at the top of the return/exhaust duct.
- TURNING VANES**: Located at the 90-degree turn in the duct.
- MANUAL DAMPER**: Located in the return/exhaust duct.
- DAMPER WHERE SCHEDULED**: Located in the return/exhaust duct.
- CFI (CONSTANT FLOW INLET) DEVICE**: Located at the bottom of the return/exhaust duct.
- CEILING**: The return/exhaust duct is shown below the ceiling.
- 6" MIN**: Minimum clearance dimension for the return/exhaust duct.
- SPIN-IN TAP FITTING**: Located at the bottom of the main duct.
- FLEXIBLE AIR DUCT CONNECTOR, SEE DETAIL ON THIS SHEET**: Located at the bottom of the main duct.
- SHEETMETAL PLENUM SAME SIZE AS AIR DEVICE**: Located at the bottom of the main duct.

- NOTES:
- 1 BRANCH DUCT TAKE-OFF WITH MANUAL DAMPER.
 - 2 BRANCH DUCT SIZES, UNLESS NOTED ON PLANS ARE TO BE SIZED AS FOLLOWS:
100 CFM AND LESS - 6" DIA.
101 CFM TO 250 CFM - 8" DIA.
251 CFM TO 400 CFM - 10" DIA.
401 CFM TO 700 CFM - 12" DIA.



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