Circular Duct Elbow and Tee Inspection Guide

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Project	Location	Status

Date	Completed by

Inspection References

No.	Done	Check / Requirement	Result	Notes / Evidence
1	☐	Confirm the current approved duct layout, project support and joint details, and applicable connection-system and sealing-product instructions are available for the fittings being inspected. Record missing references as unresolved verification items.		

Fitting Sizes

No.	Done	Check / Requirement	Result	Notes / Evidence
2	☐	Verify elbow and tee connection sizes against the approved duct layout.		

Elbow Orientation

No.	Done	Check / Requirement	Result	Notes / Evidence
3	☐	Verify each elbow's turn direction and angle against the approved duct layout.		

Tee Branch Orientation

No.	Done	Check / Requirement	Result	Notes / Evidence
4	☐	Verify each tee branch location and orientation against the approved duct layout.		

Airflow Markings

No.	Done	Check / Requirement	Result	Notes / Evidence
5	☐	Where fittings have airflow-direction markings, verify the markings agree with the airflow direction shown on the approved duct layout.		

Fitting Condition

No.	Done	Check / Requirement	Result	Notes / Evidence
6	☐	Inspect fittings for cracks, open seams, or deformation that prevents proper joint engagement.		

Interior Clearance

No.	Done	Check / Requirement	Result	Notes / Evidence
7	☐	Inspect fitting interiors for debris or obstructions before closing the connections.		

Support Locations

No.	Done	Check / Requirement	Result	Notes / Evidence
8	☐	Verify support locations near elbow and tee connections against the project support details and applicable manufacturer instructions.		

Support Components

No.	Done	Check / Requirement	Result	Notes / Evidence
9	☐	Inspect nearby hangers, support attachments, and anchors for missing or visibly loose components.		

Connection Alignment

No.	Done	Check / Requirement	Result	Notes / Evidence
10	☐	Check that mating duct ends align without forced offsets or distorted openings.		

Sealing Material Suitability

No.	Done	Check / Requirement	Result	Notes / Evidence
11	☐	Verify sealing materials or gaskets match project requirements and manufacturer instructions for the duct material, connection type, and service conditions.		

Sealing Surface Preparation

No.	Done	Check / Requirement	Result	Notes / Evidence
12	☐	Before assembly, inspect sealing surfaces for the cleanliness and surface condition required by the sealing-product instructions.		

Gasket Seating or Sealant Coverage

No.	Done	Check / Requirement	Result	Notes / Evidence
13	☐	While accessible during assembly, inspect gasket seating or sealant coverage around the full joint circumference against the connection-system instructions.		

Joint Engagement

No.	Done	Check / Requirement	Result	Notes / Evidence
14	☐	Verify joint engagement or insertion depth against the specified connection-system requirements before it becomes concealed.		

Mechanical Retention

No.	Done	Check / Requirement	Result	Notes / Evidence
15	☐	Verify fasteners, clamps, or locking features match the specified connection system, including required quantity, spacing, and engagement where stated.		

Completed Joint Sealing

No.	Done	Check / Requirement	Result	Notes / Evidence
16	☐	Inspect completed fitting seams and connections for visible gaps, displaced seals, or breaks in the sealing layer required by the project details or connection-system instructions.		

Supported Assembly Condition

No.	Done	Check / Requirement	Result	Notes / Evidence
17	☐	After assembly and with permanent supports in place, check for sagging or fitting rotation that places visible strain on connections.		

Sealant Cure

No.	Done	Check / Requirement	Result	Notes / Evidence
18	☐	Verify the sealing-product instructions for cure conditions and elapsed time are satisfied before leakage testing or system operation, as applicable.		

Specified Leakage Testing

No.	Done	Check / Requirement	Result	Notes / Evidence
19	☐	Where leakage testing is specified, verify the recorded results cover the inspected fittings and meet the project's stated acceptance criteria before concealment where required by the project inspection sequence.		

Inspection Closeout

No.	Done	Check / Requirement	Result	Notes / Evidence
20	☐	Record each defect or unverified condition with its fitting location, and verify documented correction or resolution before closing the inspection.		

Comments / Follow-up

Checklist guidance

Correctly positioned fittings can still have poorly engaged joints or inadequate nearby support. This guide supports the approved Circular Duct Elbow and Tee Inspection checklist by explaining the inspection sequence, the importance of accessible assembly checks, and the distinction between visible joint condition and verified leakage performance.

1. Gather the current approved layout, project support and joint details, and applicable manufacturer instructions. Record missing references as unresolved verification items.

2. Use the approved checklist to assess fitting configuration, condition, and nearby supports before connections are closed.

3. Coordinate assembly-stage checks so sealing preparation, gasket seating or sealant coverage, engagement, and mechanical retention can be verified while accessible.

4. Review the completed joints and permanently supported assembly, then verify applicable cure requirements and any specified leakage-test records.

5. Document defects and unverified conditions by fitting location, and confirm documented correction or resolution before inspection closeout.

Tick the box when complete. Record Not done or N/A in Result and note any follow-up.