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Model Specifications For
Round and Flat-Oval Duct and Fittings

Specification Development Considerations
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SECTION 23 31 13.16 --- ROUND AND FLAT-OVAL SPIRAL DUCTS AND FITTINGS

Writing a model specification for a product like spiral duct involves the inclusion of many product applications that may not be a part of a particular project. It is the intent of SPIDA to offer this model specification with comprehensive product descriptions that are accurate, in accordance with current recognized standards and the practices of its membership, and in language that is specific to the products and easily understood. Unfortunately, without thoughtful editing of this document to make it relevant to a particular project such a comprehensive document may cause unnecessary confusion. In order to assist the specification author, we have prepared the following set of guidelines to assist in editing the document.

Section 1.1 "RELATED DOCUMENTS"

This section was inserted as an opportunity for the designer to inform the bidder of any special or unusual documents or circumstances that might affect the bid. This section can be removed if such circumstances do not exist.

Section 1.2 "SUMMARY"

A. "SECTION INCLUDES:"

This is the most important area where editing can serve to clarify this specification. We have written this section in a manner that describes typical configurations and applications of the products. Since this model specification was written to be inclusive of most common applications, it is easier to edit by deleting those that do not apply to a project. To assist in that effort we have listed the configurations and applications below, along with instructions on what portions of the specification should be deleted if they do not apply. Some of the applications also will include additional questions that can further refine the specification. Please note that the items cited for removal are referenced by the numbering system of the original comprehensive document. When editing in Microsoft Word these numbers will change as deletions are made.

1. Round spiral ducts and fittings
   a. If there is no round spiral duct and fittings, remove this line.
2. Flat-oval spiral ducts and fittings
   a. If there is no flat-oval spiral duct and fittings, remove this line.
3. Factory insulated round spiral ducts and fittings
   a. If there is no factory insulated round spiral duct and fittings, remove this line
   b. Also remove Section 2.2.B. "Metal inner liners for double-wall construction"
   c. Also remove Section 2.2.C. "Insulation materials"
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4. **Factory insulated flat-oval spiral ducts and fittings**
   a. If there is no factory insulated flat-oval spiral duct and fittings, remove this line
   b. Also remove Section 2.2.B. "Metal inner liners for double-wall construction"
   c. Also remove Section 2.2.C. "Insulation materials"

5. **Spiral ducts and fittings fabricated of materials other than G60 galvanized steel**
   a. If there are no ducts of other than G60 galvanized steel, remove this line
   b. Also remove Section 2.2.A.2. "Where noted otherwise, the following metals shall be used"
   c. If some, but not all of the special materials in Section 2.2.A.2. above are used on the project, the author is encouraged to remove references to those not used.
   d. If stainless steel spiral ducts are included on this project the author is encouraged to edit Section 2.2.A.2.a. "Stainless" to indicate the requirement for type 304 or 316.

6. **Exposed spiral ducts and fittings**
   a. If there are no exposed spiral ducts and fittings, remove this line.
   b. Also remove Section 2.2.A.3. "Exposed ductwork"
   c. Also remove Section 3.3 "INSTALLATION OF EXPOSED DUCTWORK"

7. **Spiral ducts and fittings that will be painted**
   a. If there are no ducts to be painted, remove this line.
   b. Also remove Section 2.2.A.4. "Finishes for galvanized surfaces planned to be painted..."
   c. Also remove Section 3.4 "PAINTING DUCT"
   d. If there are spiral ducts to be painted the author may wish to edit Section 2.2.A.4. "Finishes for galvanized surfaces planned to be painted..." if there is a specific requirement for surface type required.
   e. If there are spiral ducts to be painted, the author is encouraged to identify those ducts in Specification Section 23 06 30 "HVAC AIR DISTRIBUTION SCHEDULES" and on the applicable drawings.

8. **PVC coated spiral duct and fittings for underground burial**
   a. If there are no PVC coated spiral ducts for underground burial, remove this line.
   b. Also remove Section 2.2.A.2.c.iii. "Underground Applications"
   c. Also remove Section 2.2.F. "Construction of buried ducts"
   d. Also remove Section 3.7. "INSTALLATION OF BURIED DUCTS"

9. **PVC coated spiral duct and fittings for fume exhaust applications**
   a. If there are no PVC coated spiral ducts for fume exhaust applications, remove this line.
   b. Also remove Section 2.2.A.2.c.iv. "Fume Exhaust Applications"
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10. Seismic restraint of spiral ducts and fittings
   a. If seismic restraints are not required for this duct, remove this line.
   b. Also remove Section 3.6. SEISMIC RESTRAINT DEVICE INSTALLATION

11. Leakage testing of spiral ducts and fittings
   a. If leakage testing of spiral ducts and fittings is not required, remove this line.
   b. Also remove Section 3.8.B. "Leakage Tests"
   c. If leakage testing requirements other than these are required the author is encouraged to replace Section 3.8.B. "Leakage Tests" with one that describes hose requirements or a reference to another specification section where such detail can be found.

Section 1.2 "SUMMARY"

B. "RELATED SECTIONS:

   In this section other relevant specification sections can be added and irrelevant ones can be removed.

Section 1.3 "REFERENCES"

   The items listed in this section as "A" through "AA" are documents and standards referred to in the original comprehensive version of this model specification. The author may choose to remove references that are no longer needed as the document is edited, but not doing so generally will not cause confusion as to the intent of the specification. However, item "BB. Codes" should be edited. We have listed here the national codes, along with the date of their latest edition. The author should make edition corrections if necessary and remove references to codes that do not apply in the project's jurisdiction.

Section 1.4 "DEFINITIONS"

   A. "Rated Pressure" --- the use of this term is important in defining both standard of construction and the extent of recommended leakage testing. The designer is encouraged to use the referenced specification section "23 06 30 HVAC AIR DISTRIBUTION SCHEDULES" to define system pressure classes or use this section to direct the bidder to the method for determining such classes.

Section 1.5 "SUBMITTALS"

   If LEED certification is not being pursued on the project we recommend the removal of Section 1.5.B. "LEED Submittals".

Section 1.6 "QUALITY ASSURANCE"
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The members of SPIDA work together to promote uniformity and quality in the manufacturing of spiral duct systems. We encourage the designer to consider a bidder’s participation in SPIDA when evaluating the merits of their acceptance. It is also traditional that in this section, as well as 2.1.F. "Acceptable Manufacturers", for the designer to list spiral manufacturers that may be pre-approved for the project. SPIDA participation and prior performance will establish a level of acceptable quality for the project.

Section 3.8.B. "Leakage Tests"

This section describes the current recommendation of ASHRAE for required leakage testing as described in Standard 90.1-2010. As other industry publications go through their renewal cycle it is anticipated that most will adopt the same language and level of compliance. There are some vocal groups that continue to insist that leakage testing is unnecessary. Most studies disagree. Spiral duct systems have a long history of superior low-leakage performance and most properly installed spiral duct systems will have no difficulty in exceeding this standard. We encourage not only it’s inclusion in this specification, but also its inclusion in the other ductwork specification sections for this project.

There are local and institutional codes that exceed the leakage testing requirements of ASHRAE Standard 90.1-2010. In such case we encourage the author to replace this section with one describing the required standard.