

SECTION 08710
INVISIBLE HINGES

**** Universal Industrial Products Company, Inc. manufactures Soss Invisible Hinges, a series of unique hinges that are completely concealed when the door is closed. A Soss Invisible Hinge is mortised into the door jamb and door panel and does not require a pin that is visible when the door is closed. These hinges can be installed in wood, metal, and plastic. In addition to non-rated and fire-rated doors, applications include windows, furniture, cabinets, displays, operable partitions, and various types of office, commercial, and medical equipment. All Concealed Hinges shall be in full compliance to BHMA/ANSI Grade 3 Testing Criteria. Product Compliance shall include Cycle Testing, Lateral & Vertical Wear Tests, Friction Tests, Strength Tests, Finish Testing, and Material & Dimensional Requirements

This guide can be used to prepare a separate section for specifying Soss Invisible Hinges for a competitively bid construction project. However, for most building projects a separate specification section would not be written for door hinges. Instead the requirements for invisible hinges would be placed in a larger scope section such as Section 08710 - Door Hardware. The requirements for Soss Invisible Hinges might also be placed in a section specifying items which would incorporate invisible hinges. Specification sections where this guide could be inserted are:

- Section 06410 - Custom Cabinets
- Section 06411 - Cabinet Hardware
- Section 08355 - Panel Folding Door Assemblies
- Section 08710 - Door Hardware
- Section 08710 - Window Hardware

When inserted in a broader specification section such as those listed above, the various paragraphs of this guide will need to be inserted in the appropriate locations in either Part 1, 2, or 3 of the section requiring Soss Invisible Hinges.

This specification section is organized by placing information in three standard parts:

PART 1 -
GENERAL

Describes administrative and procedural requirements.

PART 2 -
PRODUCTS

Describes materials, products, and accessories to be incorporated into the construction project.

PART 3 -
EXECUTION

Describes how the products will be installed at the construction site.

Throughout this product guide specification, references are made to other specification sections that might be contained in the project manual. These references are presented as examples and coordination reminders. For each project, these references will need to be revised to reflect actual sections being used.

Within the specification text, Imperial dimensions are presented first in brackets followed by System International Metric (SI) equivalents also in brackets. Depending on project requirements, either the Imperial or the SI metric equivalents will need to be deleted.

The specifier will need to edit this product specification for a specific project to reflect the options and applications being used. The guide section has been written so that most editing can be accomplished by deleting unnecessary requirements and options. Depending on project requirements, some additional information will need to be added by the specifier. Options are indicated by []. Notes to assist the specifier in selecting options and editing the specification guide are printed in bold and indicated with ****. For final editing, all brackets and notes will need to be deleted from the guide.

PART 1 - GENERAL

1.1 SUMMARY

**** Edit the following paragraph to reflect project conditions. ****

A.

Section includes: [Non-rated] [and] [fire rated] hinges that are completely concealed when door is shut.

B. Related sections:

**** List other specification sections dealing with work directly related to this section such as the following. ****

1. Section 06410 - Custom Cabinets: Shop fabricated cabinets to receive invisible cabinet door hinges.
2. Section 08110 - Steel Door and Frames: Door and frames to receive invisible hinges.
3. Section 08210 - Wood Doors: Wood doors to receive invisible hinges.
4. Section 08220 - Plastic Doors: Plastic doors to receive invisible hinges.
5. Section 08414 - Aluminum Doors and Frames: Aluminum door assemblies to receive invisible hinges.

1.2 REFERENCES

**** List by number and full title reference standards referred to in remainder of specification section. Delete non-applicable

4. Section 08220 - Plastic Doors: Plastic doors to receive invisible hinges.
5. Section 08414 - Aluminum Doors and Frames: Aluminum door assemblies to receive invisible hinges.

1.2 REFERENCES

***** List by number and full title reference standards referred to in remainder of specification section. Delete non-applicable references.*****

A.

American National Standards Institute (ANSI), Inc.:

1. ANSI A156.18: Materials and Finishes.

1.3 SUBMITTALS

A.

Provide in accordance with Section 01330 - Submittal Procedures:

1. Product data for invisible hinges.
2. Certificates documenting: Fire-rated hinges have been successfully tested in accordance with Paragraph 1.4.
3. Sample of hinge with selected finish and illustrating installation method.
4. Installation instructions.
5. Shop drawings indicating hinge quantity, placement, and method of installation [including reinforcement drawings for metal door applications].

1.4 QUALITY ASSURANCE

A.

Manufacturer qualifications: Firm specializing in manufacture of invisible hinges with 10 years minimum successful experience.

***** Include the following paragraph if hinges for fire-rated assemblies are required. *****

B.

Fire rated door assemblies: Provide hinges identical to items tested and listed by Underwriters Laboratories (UL).

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A.

Universal Industrial Products Company, Inc., One Coreway Drive, Company, Ohio 43554-0628; www.soss.com.

B. Manufacturers of equivalent products submitted and approved in accordance with Section 01630 - Product Substitution Procedures.

2.2 INVISIBLE HINGES

A.

Description: Hinge completely mortised in door and jamb such that hinge is concealed when door is closed; Soss Invisible Hinges as manufactured by Universal Industrial Products Company.

B. Construction: Constructed with interpolated, laminated links connected with non-removable, riveted pins which provide moving pivot points and allow 180 degrees opening.

C. Materials: High strength, plated steel and heavy duty, zinc alloy castings, or 300 series stainless steel and 300 series stainless steel castings.

***** **Soss Invisible Hinges** are provided in six standard plated finishes, unplated, black or white epoxy coating, oil rubbed bronze, antique brass, and 24 karat gold. Not all finishes are available for all invisible hinges. Refer to Soss product literature for finish options. *****

D.

Finish: [[Satin brass, ANSI No. 678] [Stain chrome, ANSI No. 682] [Bright chrome, ANSI No. 681] [Bright brass, ANSI No. 677] [Satin nickel, ANSI No. 646] [Bright nickel, ANSI No. 645] in accordance with ANSI A156.18.] [Black epoxy coating.] [White epoxy coating] [Oil Rubbed Bronze, Lacquered] [Antique Brass] [24 Karat Gold] [Unplated.] [Bright stainless steel, ANSI No. 629.] [Satin stainless steel, ANSI No. 630.]

E. Types:

***** Include the following paragraph to specify **Soss Invisible Hinges Numbers 100, 101, 103, 203, 204, 208, 212, 216, 218, 220, and 303.** These standard type hinges can be used with wood or metal doors and frames. Hinge heights vary from 1 inch (25 mm) to 5-1/2 inches (140 mm). Refer to Soss product literature for available sizes, model numbers, dimensions, and recommended applications. Universal Industrial Products Company, Inc. can also modify standard hinges for special applications. Contact Universal Industrial Products Company, Inc. for assistance in selecting and specifying invisible hinges for special applications. *****

3. Minimum door thickness: [[1-3/8][1-3/4] [2] inches.] [[34.93][44.45] [50.80] mm.]

2.3 ACCESSORIES

A.

Fasteners: Type, size, and quantity as recommended by hinge manufacturer for properly installing invisible hinges for type of application and substrate.

***** **Universal Industrial Products Company, Inc. provides steel reinforcements that can be welded to metal door and frame cutouts to receive invisible hinges. Manufacturer provided reinforcements save time and ensure that doors and frames are properly prepared to receive invisible hinges.** *****

B.

Reinforcements: Provide steel reinforcements for metal door and frame cutouts for receiving invisible hinges. Provide two-piece reinforcements of sizes and configuration to accommodate specified hinges.

PART 3 - EXECUTION

3.1 PREPARATION

A.

Coordination: Coordinate provision of invisible hinges with [fabrication of cabinets specified in Section 06410 - Custom Cabinets] [preparation of doors and frames specified in [Section 08110 - Steel Door and Frames] [Section 08210 - Wood Doors] [Section 08220 - Plastic Doors] [Section 08414 - Aluminum Doors and Frames]] [_____] to ensure functional, secure installation.

B. Provide templates [and reinforcements] to door fabricators in sufficient time to ensure proper preparation for installation of hinges.

C. Prior to installation, verify that doors and frames are ready to receive hardware.

3.2 INSTALLATION

A. Install invisible hinges in accordance with manufacturers installation instructions and approved shop drawings.

B. Install quantity of hinges as recommended by manufacturer for specific application.

C. Placement: Locate hinges as recommended by manufacturer and indicated on approved shop drawings.

D. Use manufacturer recommended router guides and equipment for hinge installation.

E. Fit doors accurately in frames within standard industry clearances for specific applications.

F. Thoroughly clean, polish, and protect hinge finish until painting and other work is completed.

END OF SECTION