Halfen USA, Inc. July 2014

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Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat, SectionFormat,* and *PageFormat,* as described in *The CSI Construction Specifications Practice Guide.*

This section must be carefully reviewed and edited by the Architect or Engineer to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all “Specifier Notes” after editing this section.

Section numbers and titles are based on *MasterFormat 2014 Update.*

1. 03 15 23

SHEAR DOWELS

Specifier Notes: This section covers Halfen USA, Inc. “HSD” shear dowels and “HSD-ULTRA” high-capacity shear dowels for cast-in-place and precast concrete. Consult Halfen USA, Inc. for assistance in editing this section for the specific application.

* 1. GENERAL
     1. SECTION INCLUDES

Specifier Notes: Edit the following sentence as necessary.

* + - 1. Shear dowels for [cast-in-place concrete] [precast concrete].
    1. RELATED REQUIREMENTS

Specifier Notes: Edit the following list of related sections as necessary. Limit the list to sections with specific information that the reader might expect to find in this section, but is specified elsewhere.

* + - 1. Section 03 30 00 – Cast-in-Place Concrete.
      2. Section 03 40 00 – Precast Concrete.
    1. REFERENCE STANDARDS

Specifier Notes: List reference standards used elsewhere in this section, complete with designations and titles.

* + - 1. American Concrete Institute (ACI) ([www.concrete.org](http://www.concrete.org)):
         1. ACI 318 – Building Code Requirements for Structural Concrete.
      2. American Institute of Steel Construction (AISC) (www.aisc.org):
         1. AISC Steel Construction Manual.
    1. PREINSTALLATION MEETINGS

Specifier Notes: Edit preinstallation meetings as necessary. Delete if not required.

* + - 1. Convene preinstallation meeting [1 week] [2 weeks] before start of work of this section.
      2. Require attendance of parties directly affecting work of this section, including Contractor, Architect, Engineer, installer, and manufacturer’s representative.
      3. Review materials, installation, protection, and coordination with other work.
    1. SUBMITTALS

Specifier Notes: Edit submittal requirements as necessary. Delete submittals not required.

* + - 1. Comply with Section 01 33 00 – Submittal Procedures.
      2. Product Data: Submit manufacturer’s product data, including design capacities and installation instructions.
      3. Shop Drawings: Submit shop drawings, including plans, elevations, sections, and details, indicating dimensions, tolerances, materials, and placement of shear dowels.
      4. Warranty Documentation: Submit manufacturer’s standard warranty.
    1. QUALITY ASSURANCE
       1. Manufacturer’s Qualifications:
          1. Capable of providing field service representation during installation.
          2. Manufacture in accordance with established quality assurance program.
    2. DELIVERY, STORAGE, AND HANDLING
       1. Delivery Requirements: Deliver materials to site in manufacturer’s original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
       2. Storage and Handling Requirements:
          1. Store and handle materials in accordance with manufacturer’s instructions.
          2. Keep materials in manufacturer’s original, unopened containers and packaging until installation.
          3. Store materials in clean, dry area protected from weather.
          4. Protect materials during storage, handling, and installation to prevent damage.
  1. PRODUCTS
     1. MANUFACTURERS
        1. Manufacturer: Halfen USA, Inc., PO Box 18687, San Antonio, Texas 78218. Toll Free 800-423-9140. Fax 877-683-4910. Website [www.halfenusa.com](http://www.halfenusa.com). Email info@halfenusa.com.

Specifier Notes: Specify if substitutions will be permitted.

* + - 1. Substitutions: [Not permitted] [In accordance with Division 1].
      2. Single Source: Provide materials from single manufacturer.
    1. SHEAR DOWELS

Specifier Notes: Specify required type of shear dowels. Delete shear dowels not required.

* + - 1. Shear Dowels: Halfen “HSD” shear dowels.

Specifier Notes: Specify size of shear dowels.

* + - * 1. Size: [“HSD-20”] [“HSD-22”] [“HSD-25”] [“HSD-30”].
        2. Description:

Does not allow joint movement perpendicular to dowel.

Allows joint movement in longitudinal direction.

* + - * 1. Material: Stainless steel.
        2. Design: ACI 318 and AISC Steel Construction Manual.
        3. Components:

Dowel: “HSD-D”.

Sleeve: “HSD-S”.

* + - 1. Shear Dowels: Halfen “HSD-V” shear dowels.

Specifier Notes: Specify size of shear dowels.

* + - * 1. Size: [“HSD-20V”] [“HSD-22V”] [“HSD-25V”] [“HSD-30V”].
        2. Description:

Allows lateral joint movement in 1 direction.

Allows joint movement in longitudinal direction.

* + - * 1. Material: Stainless steel.
        2. Design: ACI 318 and AISC Steel Construction Manual.
        3. Components:

Dowel: “HSD-D”.

Sleeve: “HSD-SV”.

* + - 1. High-Capacity Shear Dowels: Halfen “HSD-ULTRA” high-capacity shear dowels.

Specifier Notes: Specify size of shear dowels.

* + - * 1. Size: [“HSD-ULTRA18”] [“HSD-ULTRA22”] [“HSD-ULTRA24”] [“HSD-ULTRA30”] [“HSD-ULTRA35”] [“HSD-ULTRA42”] [“HSD-ULTRA52”].
        2. Description:

Does not allow joint movement perpendicular to dowel.

Allows joint movement in longitudinal direction.

* + - * 1. Material: Stainless steel.
        2. Design: ACI 318 and AISC Steel Construction Manual.
        3. Components:

Dowel: “HSD-ULTRA-D”.

Sleeve: “HSD-ULTRA-S”.

* + - 1. High-Capacity Shear Dowels: Halfen “HSD-ULTRA-V” high-capacity shear dowels.

Specifier Notes: Specify size of shear dowels.

* + - * 1. Size: [“HSD-ULTRA18V”] [“HSD-ULTRA22V”] [“HSD-ULTRA24V”] [“HSD-ULTRA30V”] [“HSD-ULTRA35V”] [“HSD-ULTRA42V”] [“HSD-ULTRA52V”].
        2. Description:

Allows lateral joint movement or rotation in 1 direction.

Allows joint movement in longitudinal direction.

* + - * 1. Material: Stainless steel.
        2. Design: ACI 318 and AISC Steel Construction Manual.
        3. Components:

Dowel: “HSD-ULTRA-D”.

Sleeve: “HSD-ULTRA-SV”.

* 1. EXECUTION
     1. EXAMINATION
        1. Examine areas of formwork to receive shear dowels.
        2. Notify Architect of conditions that would adversely affect installation.
        3. Do not begin installation until unacceptable conditions are corrected.
     2. INSTALLATION
        1. Install shear dowels in accordance with manufacturer’s instructions at locations indicated on the Drawings.
        2. Securely attach shear dowel sleeves to formwork to avoid displacement during placing of concrete.
        3. Install shear dowels plumb, level, square, and perpendicular to joints.
     3. PROTECTION
        1. Protect installed shear dowels from damage during construction.

END OF SECTION