



# SPEED PLATE®

# MASTER SPECIFICATION

## SUGGESTED MASTER SPECIFICATION

### SECTION 03 20 00 PLATE DOWEL SYSTEM

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES:

- A. Provision for assuring proper field positioning and alignment of load plate dowels at concrete flatwork construction joints.
- B. Provision for allowing free shrinkage axially and laterally of concrete surfaces adjacent to construction joints while providing proper load transfer and preventing differential settlement.

##### 1.02 RELATED SECTIONS

- A. Section 03 10 00 - Concrete Forming and Accessories
- B. Section 03 20 00 - Concrete Reinforcing
- C. Section 03 30 00 - Cast-In-Place Concrete

##### 1.03 REFERENCES

- A. American Concrete Institute (ACI):
  - 1. ACI 117: Specifications for Tolerances for Concrete Construction and Materials and Commentary
  - 2. ACI 302.1R: Guide for Concrete Floor and Slab Construction
  - 3. ACI 315 – SP-66: ACI Detailing Manual
  - 4. ACI 330R: Guide for the Design and Construction of Concrete Parking Lots
  - 5. ACI 360R: Guide to Design of Slabs-on-Ground
- B. American Society for Testing and Materials International (ASTM)
  - 1. ASTM A36 Standard Specification for Carbon Structural Steel
  - 2. ASTM A576 Standard Specification for Steel Bars, Carbon, Hot-Wrought, Special Quality

##### 1.04 SUBMITTALS

- A. Manufacturer's Product Data and installation instructions for SIKA SPEED PLATE system.
- B. Shop Drawings indicating load plate dowel thickness and placement information including on center spacing and slab thickness dimensions.
- C. Comply with ACI referenced guidelines as well as manufacturer's installation instructions for arrangement of SIKA SPEED PLATE system.

##### 1.05 QUALITY ASSURANCE

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### A. Preconstruction/Pre-installation meeting:

1. A preconstruction/pre-installation meeting should be held, as required by the manufacturer, prior to the installation of SIKA SPEED PLATE system, to review installation procedures and coordinate with other work and trades.
2. This meeting to include General Contractor, Concrete Subcontractor, and any other parties directly working with the installation of the concrete slab-on-ground.

### 1.06 DELIVERY, STORAGE AND HANDLING

- A. Deliver SIKA SPEED PLATE system in manufacturer's packaging.
- B. Cover and store SIKA SPEED PLATE system off ground to protect from exposure to rain, rusting, and damage.

## PART 2 PRODUCTS

### 2.01 MANUFACTURER

- A. Sika (St. Louis Sales Office), St. Louis, MO. Phone: 800-325-9504 Fax: 800-551-5145; [usa.sika.com](http://usa.sika.com)

### 2.02 MATERIALS

- A. Acceptable products:
  1. SIKA SPEED PLATE system for construction joints.
- B. Materials:
  1. Provide SIKA SPEED PLATE system, including sleeve pocket former and steel load plate dowel.
    - a. SIKA SPEED PLATE system is comprised of high density plastic sleeve pocket former and insert to properly position load plate dowel for axial and lateral shrinkage capability.
    - b. Steel load plate dowel from hot rolled steel plate meeting ASTM A36.
    - c. SIKA SPEED PLATE dimension: 1/4", 3/8", and 3/4" thick by 4" x 6" load plate dowel. (Select appropriate load plate dowel dimensions).
  2. Refer to Contract Documents for size and spacing of SIKA SPEED PLATE system.

## PART 3 EXECUTION

### 3.01 INSTALLATION

- A. SIKA SPEED PLATE system for construction joints.
  1. Snap a chalk line or use the SIKA SPEED PLATE alignment tool along the form at the desired dowel depth. Ideally, the centerline of the SIKA SPEED PLATE sleeve is positioned at the centerline of the slab, but is no less than 2 1/4" from the top of the slab.
  2. Set forms and nail the SIKA SPEED PLATE sleeve to the form with the preset nails provided. SIKA SPEED PLATE thickness and spacing shall be per contract documents.
  3. Pour and finish the first slab according to ACI specifications.
  4. Use internal vibration to consolidate the concrete around the SIKA SPEED PLATE system.
  5. Strip forms and bend nails flush with the face of the construction joint.
  6. Insert the steel SIKA SPEED PLATE dowel through the label and into the sleeve cavity. If possible, this should be done while the concrete is still green for easier placement. Do not use excessive force while inserting SIKA SPEED PLATE dowel as this could potentially damage the concrete.
  7. Pour and finish the adjacent slab(s), again using an internal vibrator to consolidate the concrete around SIKA SPEED PLATE dowels, according to ACI specifications.

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### **3.02 FIELD QUALITY CONTROL**

- A. Place edge forms plumb. Out of plumb forms may result in misaligned dowels.
- B. Notify Engineer and/or Special Inspector, prior to placing concrete, for inspection of SIKA SPEED PLATE system.
- C. Thoroughly vibrate concrete to achieve proper consolidation and elimination of entrapped air, thereby minimizing voids under SIKA SPEED PLATE system.
- D. Ensure protection from movement of forms or damage of SIKA SPEED PLATE system during concrete placement. Avoid placing concrete directly onto the SIKA SPEED PLATE sleeves.

**END OF SECTION**

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