HOW TO SPECIFY: CUSTOM CASTINGS

V- Node Column and Integrated Base Casting Example

GETTING READY: Download
CAST CONNEX CUSTOM CASTING SPECIFICATION (CastingSpecification)
From www.castconnex.com/products/custom-components

STEP 1: GEOMETRY

Clearly define external geometry of cast steel node.

On structural drawings:
- Define centerline geometry with workpoints, and dimension their locations using vertical and horizontal dimensions and/or with angles.
- Dimension key structural features: including size of connecting members, length of cast steel arms, shape and thickness of cast base plate, and other structural features.

On architectural drawings:
- Dimension key architectural features: including any curvature or radii that define the form of the casting.

*Contact a Cast Connex representative to help identify key architectural and structural features prior to issuing drawings.

STEP 2: LOADING

On structural drawings, provide governing axial, shear and moments at the workpoint locations both in- and out-of-plane using:
- Tabular form, or
- Callouts on the detail.

Note: these loads are used to price the cast steel node. Once the project is awarded, Cast Connex may request equilibrated load combinations to complete structural analysis of cast steel node; see Casting Specification for delegated design of steel castings.

STEP 3: CONNECTION

Structural Engineer of Record: design or delegate design to the connection engineer the connections between the casting and adjacent structural elements. When relevant:
- Design or delegate connections between casting and adjacent concrete elements.
  - Provide diameter and location of anchor rods within the cast base plate feature
- Design or delegate connections between casting and adjacent steel elements.
  - Indicate welded joints where applicable
  - Include any architecturally exposed structural steel (AESS) requirements; see Casting Specification for AESS craftsmanship.

*Contact a Cast Connex representative to coordinate specific detail requirements.

STEP 4: SPECIFICATION

Call out steel casting on drawings and include casting specification language within contract specification.
- Call out steel casting on the detail with:
  - CAST CONNEX CUSTOM CAST STEEL NODE, REFER TO SPECIFICATIONS
  
For public projects, callout steel casting on the detail with:
- CAST CONNEX CUSTOM CAST STEEL NODE OR APPROVED EQUIVALENT, REFER TO SPECIFICATIONS

Include Casting Specification within Division 05 of the contract specification and coordinate product specific requirements with Cast Connex. Specification includes:
- Performance-Based Specification Language
  - Delegate design of steel castings by Cast Connex in project specifications.
- Visual Inspection Criteria for Surface Quality
  - Coordinate surface quality expectations with Cast Connex to determine appropriate visual inspection criteria.
- Coating & Finishing Requirements
  - Specify if steel casting is to be coated with same coating system of adjoined structural steel elements, or otherwise.
- Visual requirements of Welded Connections
  - Specify AESS welded connections to be ground smooth and flush between casting and adjacent structural elements.

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PLAN DETAIL 1

LOAD TABLE

Refer to associated step # on right side of page