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Website: [FramingSystem.us/Dynacore-Systems](http://FramingSystem.us/Dynacore-Systems)

DYNACORE™

# DYNACORE PRODUCT GUIDE

This guide will educate you on the DYNACORE  
Modular Building System from Framing Systems.

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## INTRO

Dynacore™ is a modular permanent concrete form system designed for use in new multistory buildings.

It is used to create building cores and shafts quickly and efficiently by stacking modules as the building goes vertical.

The system is fabricated from vertical light gauge members which have penetrations allowing for the placement of horizontal rebar, as well as the flow of concrete as the system is filled with concrete after erection.



## USAGE

DYNACORE™ WAS DEVELOPED PRIMARILY FOR “MID-RISE” TYPE BUILDINGS BUT CAN ALSO BE USED WITH MANY TYPES OF BUILDING STRUCTURES INCLUDING STRUCTURAL STEEL, WOOD FRAMED, LIGHT GAUGE METAL FRAMED, AND PRE-ENGINEERED STEELFRAMED. IT IS A COST-EFFECTIVE ALTERNATIVE TO TRADITIONAL MASONRY, CAST-IN-PLACE, AND PRECAST BUILDING SHAFTS AND CORES.



## PROBLEM SOLVING



Dynacore™ was developed due to the need for faster, safer, and more efficient building erection. Masonry shafts and cast-in-place shafts traditionally are erected to the full building height before the rest of the structure goes vertical limiting the mobilization of other trades during erection. Depending on the quantity and height of the shafts, this often requires a duration of 6 – 8 weeks in the project schedule for shaft installation before the rest of the structure can go vertical. Dynacore™ allows the rest of the building structure to be erected as the modules are set eliminating the scheduling duration.



## SIZE & SPECS

Dynacore™ modules are available in wall cavity widths ranging from 8" (10" overall), 10" (12" overall), 12" (14" overall), 14" (16" overall) with rebar spacing based on the project specific requirements. Reinforced rebar conditions, cross-ties, and corner bars are factory installed as needed based on the project structural requirements.

**Dynacore™ modules are designed** to accept most rebar configurations and provisions are made at the factory for correct spacing and alignment. Structural values for shear and lateral loads are superior to traditional masonry allowing for fewer supplementary shear walls at locations other than at the cores.

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### **Multiple Configuration Options**

Dynacore™ modules can accept embeds for the attachment of elevator rails, structural beams, and structural supports which are modeled into the module design. Beam pockets can also be modeled for elevator hoist beams and shaft separation beams.

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### **Fire Rating**

Dynacore™ walls system has a fire rating based on the thickness of the concrete fill according to ASTM E119 and IBC 721.1(2) Wall thickness of 5.0" of concrete carries a fire rating of 2 hours.

Wall thickness of 6.2" carries a fire rating of 3 hours. This fire rating increases as the wall thickness increases.

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### **Up to 10' Vertical Pour**

Dynacore™ modules are designed to be filled with concrete after installation and can withstand up to 10' of vertical fill per pour. Horizontal rebar is pre-installed and secured in the module at the factory. Vertical rebar is field installed by inserting (factory supplied) rebar into factory installed clips for positioning.

# COMPATIBILITY & PROCESS

**DYNACORE MODULES ARE SHIPPED WITH CORRUGATED GALVANIZED METAL CLADDING WHICH CAN BE LEFT AS IS, PAINTED, OR COVERED WITH A BUILDING FINISH MATERIAL. STAIR COMPONENTS ARE FACTORY PRIMED.**

Dynacore™ modules are set as soon as the foundations are in place, and continually stacked as the building goes vertical. Each module has pick points built into the framework which allows screw eyes to be used for rigging. After the module is in place, the screw eyes are removed and alignment pins are screwed back in the same hole to accept the next module.

Dynacore™ modules are designed for quick and efficient installation and have rigging points for ease of hoisting and setting. The 1st module sets directly on the building foundation and has height adjustment screws to allow for field leveling of the module. The corrugated metal cladding is provided pre-cut for field installation at the 1st module to allow access to height adjustment and rebar connection details to the foundation. Foundation embeds (factory supplied) are field installed in the foundation and a rebar connection detail is provided for the structural connection to the foundation.

Setting the 1st module requires the most erection time as it requires initial positioning, leveling, and rebar/foundation connection details. Leveling bolts are provided to assist in setting the 1st module as shown in the picture below. Subsequent module erection has proved very quick and efficient with units often installed in less than 1 hour. There are minimal connection details between modules beyond the pins provided for vertical alignment.

**Dynacore™ stair modules have factory installed stairs and landings in place and sleeves are premounted on the stringers for (factory supplied) railings. A minimal amount of field connection is required for railings as they connect between flights of stairs. Handrails (factory supplied) are shipped loose for field installation.**





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