

dukane | precast - Double-Wall System

WHAT IS A PRECAST DOUBLE WALL?

The Double Wall Precast Panel System consists of a process whereby two pre-stressed, reinforced concrete panels are joined to make a sandwich panel wall, with the unique twist that it provides a “form finish” on BOTH sides of the completed wall. The insulation that is installed between the two concrete wythes, is a high R-value closed cell polyurethane that is partially bio-based.

The double wall panel systems are used for walls and floors.

Typical R-values of the Double-wall, range from R-19 to R-38 when using the 8” thick and 12” thick exterior walls. The fire ratings are 2-hour minimum all the way up to 4 hours—achievable quite easily when utilizing lightweight concrete.



Construction photo of a 400-bed college dormitory being built with the innovative Double-wall precast system. This project utilized the unique product which is form-finished on both panel sides (walls & floors). The majority (4-1/2 miles total) of radiant floor tubing was cast in the precast floors at the manufacturing plant.

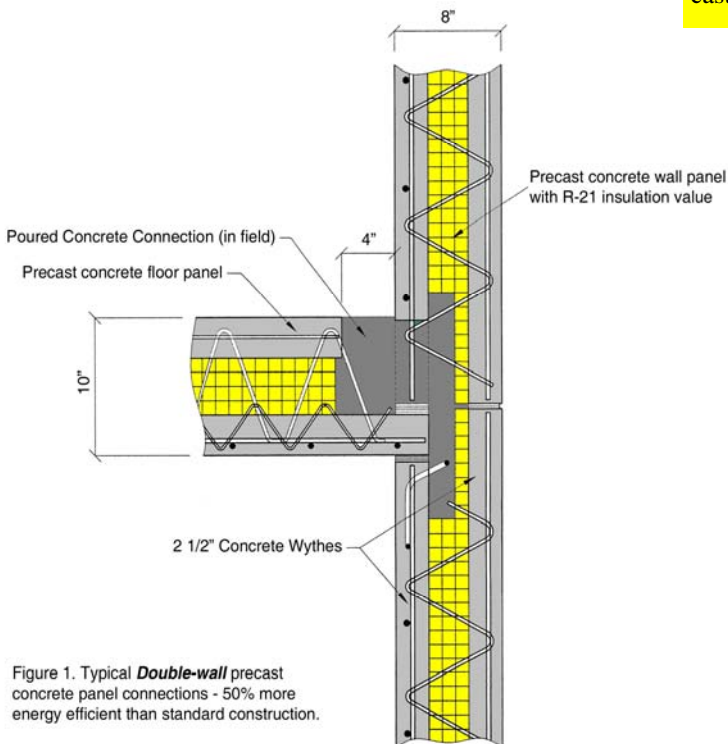


Figure 1. Typical **Double-wall** precast concrete panel connections - 50% more energy efficient than standard construction.



KEY FEATURES & BENEFITS OF THE DOUBLE WALL SYSTEM:

- One of the most Innovative Building Systems available
- Extremely Sustainable & LEED friendly
- 20-40% More Energy-Efficient than competing systems
- Proven able to withstand tornado strength winds
- More fire resistant than conventional building materials
- Each wall side is supplied as a smooth finish—eliminating the need for metal studs & dry wall on inside surface
- Electrical conduit and boxes are cast in the wall surfaces
- Radiant heat tubing is installed in plant per plans

dukane | precast - Double-Floor

Double-Floor- The smoothest, flattest precast floor

The Double-Floor precast flooring system represents a revolutionary concept that incorporates some great advances in pre-stressed/precast manufacturing, along with the embracing of additional material marriages to bring a true systems approach to floor construction. For instance, radiant tubing is installed in the upper layer of the floor panel in a continuous loop at the manufacturing plant to save time and money. In addition, because the floors are so flat, (there is not significant camber) no field topping is necessary after precast floor installation. Floor panel sizes can be 12 ft X 35 ft.



Double-Wall Building Systems are great for:

- College Dormitories • Multi Family Housing
- Condominiums • Assisted Living • Hotels • Townhomes
- Senior Housing • Apartments • Mixed Use

