

Hybrid Precast Connection

MOMENT Precast Shoe



MOMENT Grout Coupler



MOMENT Hybrid Precast Connection

The Hybrid Precast Connection is a construction method that combines the use of MOMENT Precast Shoes with MOMENT Grout Couplers to connect precast elements. Using these two products in combination offers many advantages over other build techniques, including substantial savings in cost and time, and improvements in site safety.

MOMENT Precast Shoe

The bolted Precast Shoe connection with its unique 'dry joint' feature, enables the precast element to be assembled and become immediately load-bearing without propping. This reduces crane use, installation time and improves site safety.

MOMENT Half and Full Grout Couplers

Grout Couplers offer shorter development lengths (compared to traditional grout tubes), reducing the installation time in the precast factory by eliminating the need for confinement steel and enabling connections in much thinner elements.

These two products offer excellent advantages separately; when used together as the MOMENT Hybrid Precast Connection they provide the perfect combination.

Precast Shoe



Half and Full Grout Coupler



Reduce Costs and Improve Safety

- Using MOMENT Precast Shoes in conjunction with MOMENT Grout Couplers offers substantial cost savings (up to 50%), compared to a full precast shoe solution.
- Our Grout Couplers use much fewer confinement rebars compared to traditional solutions such as corrugated ducts.
- With no props needed, material and storage space is saved.
- Construction tolerances are accommodated, resulting in less rework and saving time on site.
- The precast section can be lifted, placed, levelled and secured in less than 30 minutes. Once the Precast Shoes are installed, it is immediately load-bearing. Work can continue on the next precast element and later more than one assembly can be grouted, reducing both worker and crane time.
- With less worker and crane time, and the absence of props reducing site access, site safety is immediately improved.

Installation Process



Step 1

MOMENT Precast Shoes and MOMENT Grout Couplers are cast into the first element in precast yard.



Step 2

Rebar for the MOMENT Grout Couplers and anchor bolts for the MOMENT Precast Shoes are arranged and cast on-site in the second element.



Step 3

The first precast element is lifted and assembled on site.



Step 4

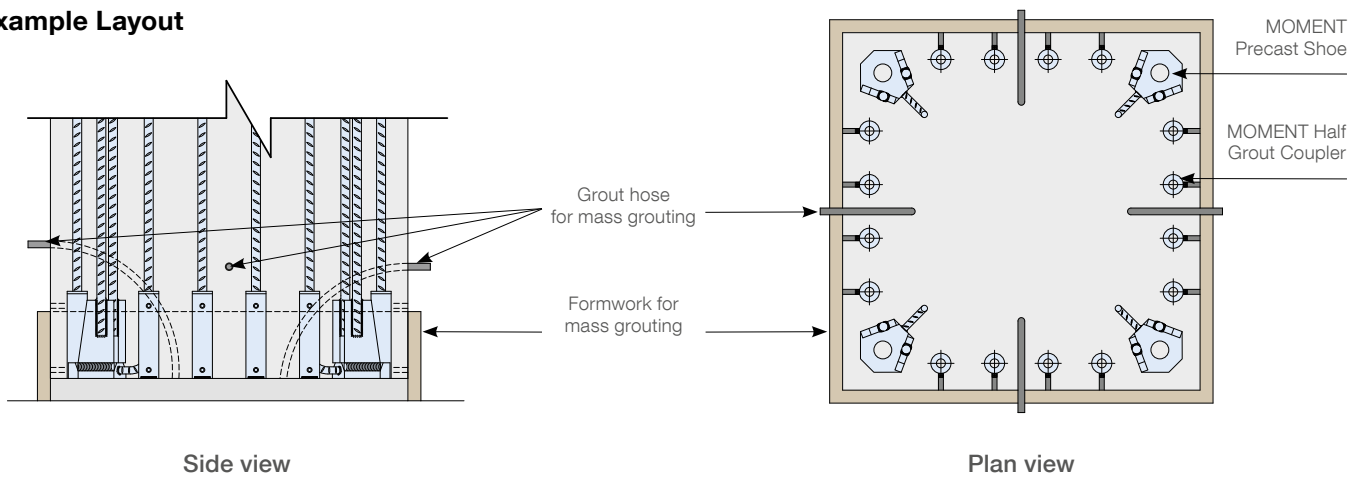
High strength bolts are tightened, completing the installation of the MOMENT Precast Shoes, making the assembly immediately load-bearing.



Step 5

Formwork is added to the base and grout is poured, filling all voids including the couplers, and forming a permanent structural connection.

Example Layout



The grouting of the Precast Shoe, Grout Coupler and the base takes place in one operation. This unique method saves considerable time on site. With additional grouting hoses cast and formwork secured on-site, grout is poured into the base, filling all voids including the Precast Shoes and Grout Couplers.

Example Applications

Precast Column Connection



Elevator Shaft Connection





Please contact Leviat for more information on these products.

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