NORDIMPIANTI

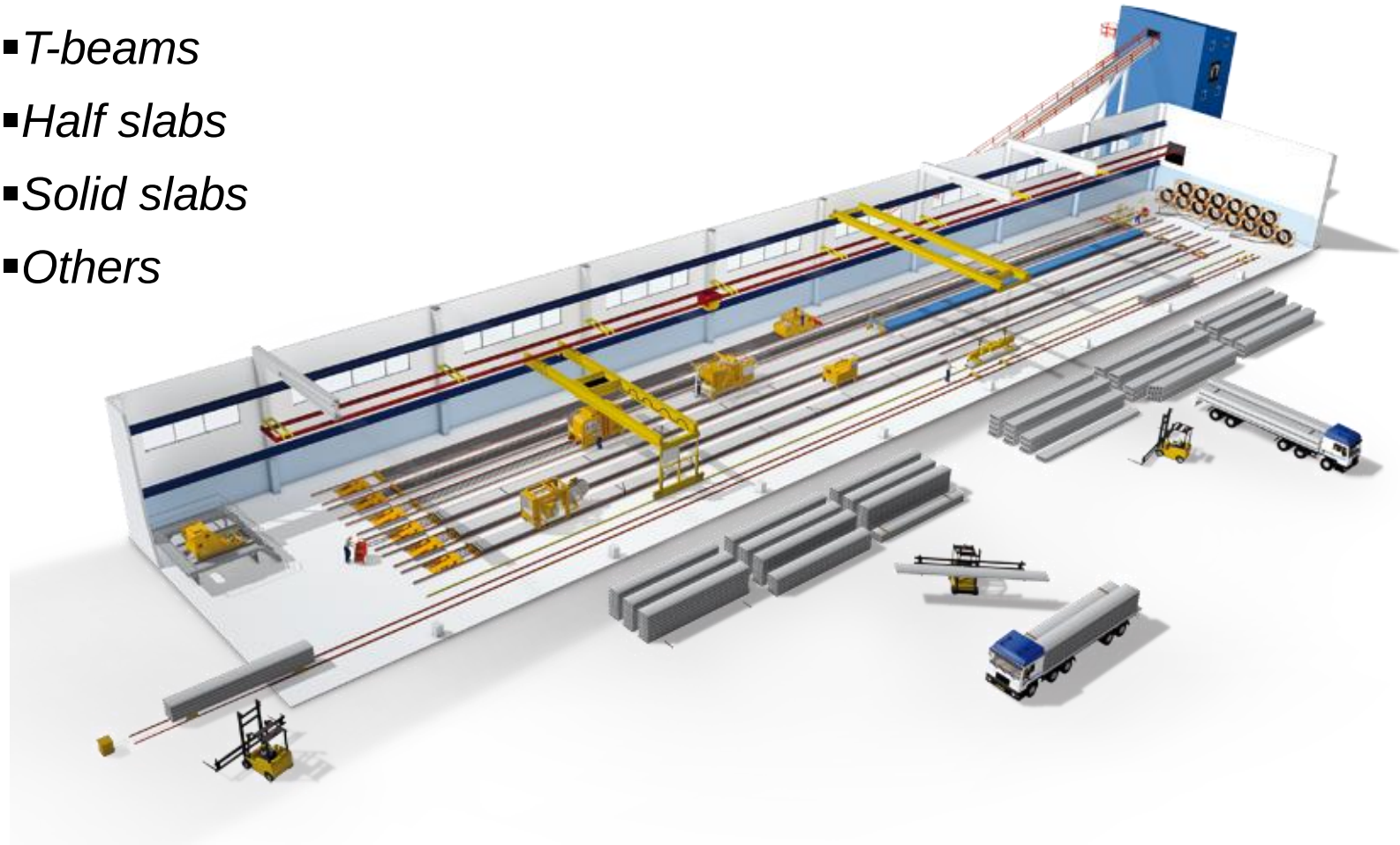
Precast Flooring solutions for building and infrastructure in seismic area

Gianluca Todeschini, Civil Engineer

About Us

NORDIMPIANTI is one of the world's leading manufacturers of production lines and machines for the production of prestressed concrete elements:

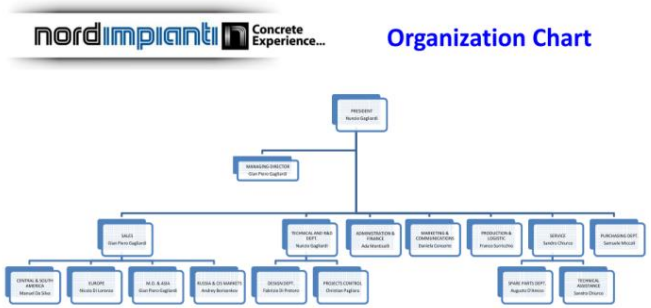
- *Hollow core slabs*
- *T-beams*
- *Half slabs*
- *Solid slabs*
- *Others*



About Us

Founded in **1974** as a small family business

Active in more than **50** countries



55 employees

About Us

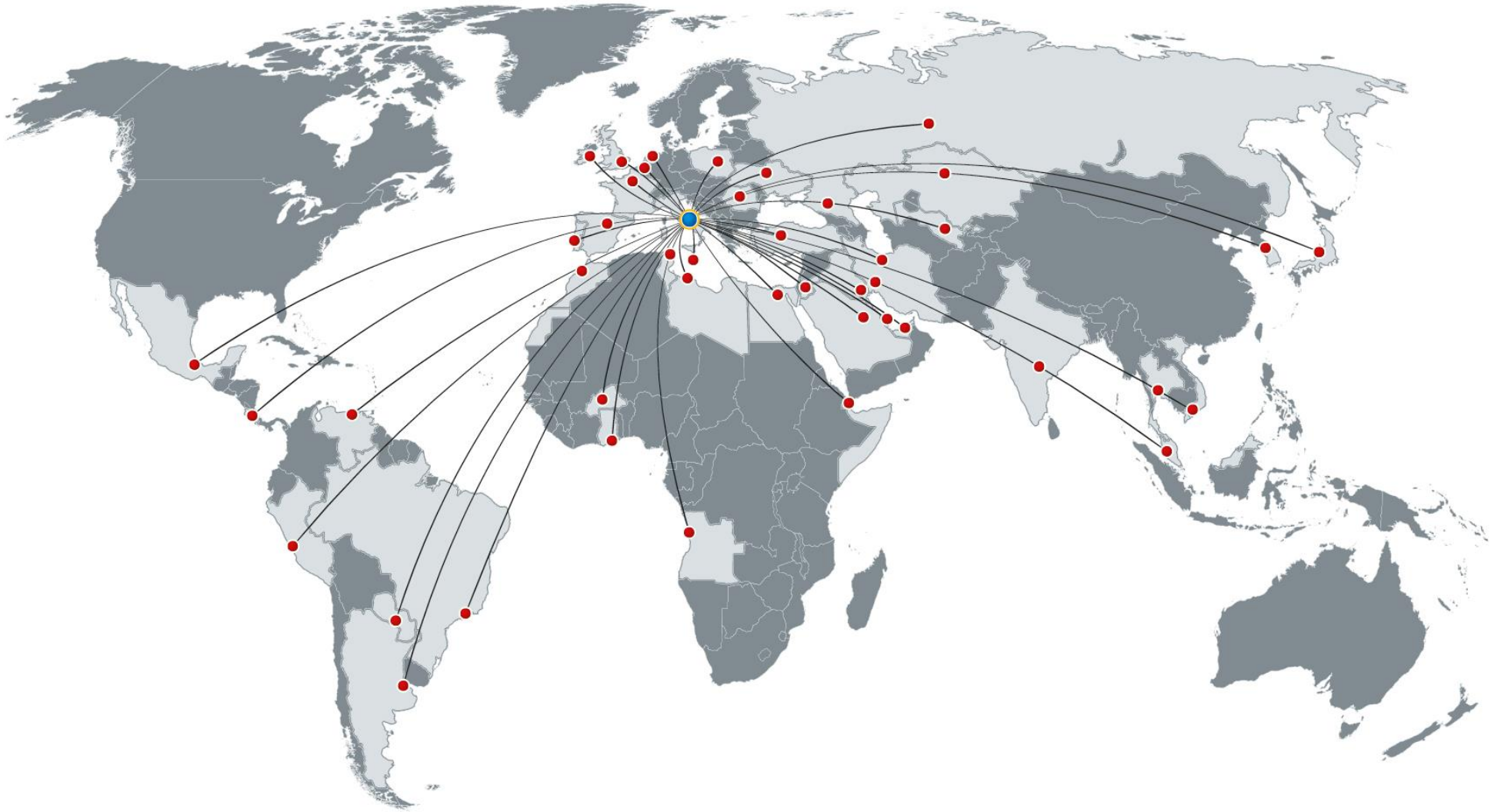
Turnover between € **12-15** mln

Over a **hundred** plants delivered

More than a **thousand** of Nordimpianti's machines are in operation around the world

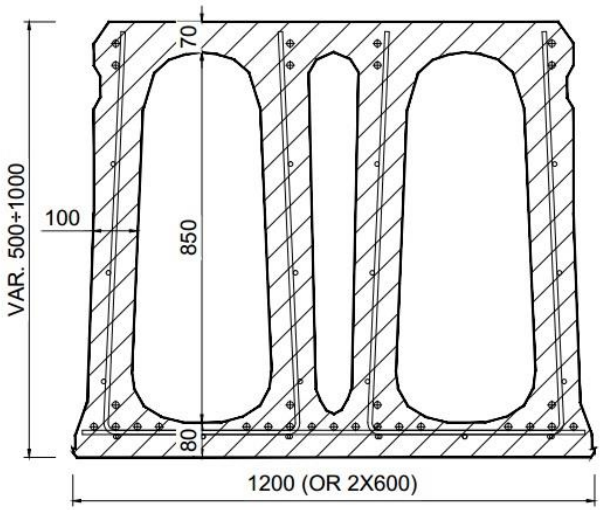
About Us

Representative offices covering over **37** countries around the world

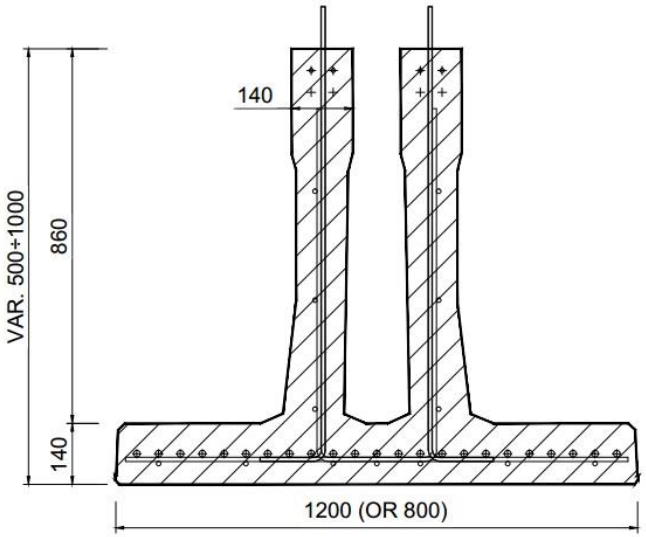


Bridge applications

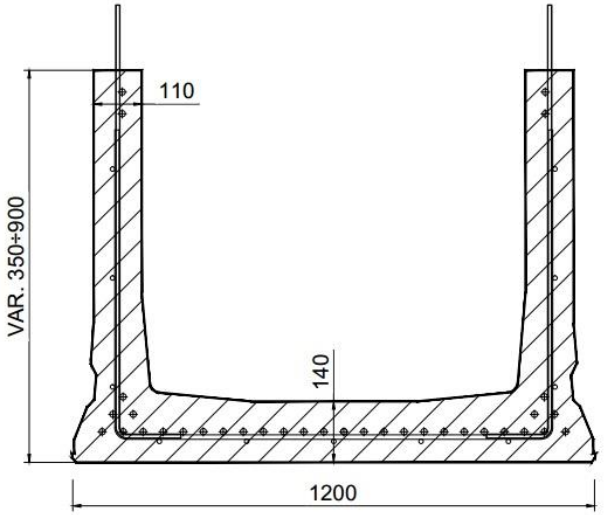
HOLLOW CORE SLAB
WEIGHT =13.76 kN/m (2450 kg/m³)



INVERTED DOUBLE TEE
WEIGHT =9.52 kN/m (2450 kg/m³)



DOUBLE RIBBED (U-SHAPED)
WEIGHT =8.37 kN/m (2450 kg/m³)



Bridge applications

High bearing capacity deck

Box section highway underpass

Bridge applications

Reconstruction of a bridge deck destroyed by a landslide

Bridge type with 22 m span

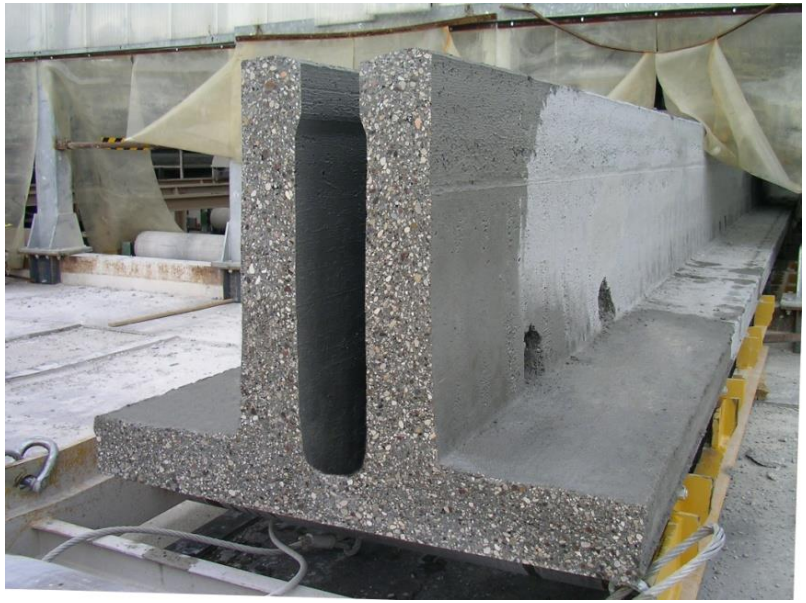
Bridge applications

Main girders ready for 2nd phase concrete grout

U-shaped girder launch

Inverted Double T-Beam

Product name	**INVERTED DOUBLE T-BEAMS**
Field applications	**BRIDGE APPLICATIONS, INFRASTRUCTURE**
Element dimensions	**H 500, 600, 700, 800, 900, 1000 mm**



Casting process

Hollow core slab up to 1 meter high!

Product name	**HOLLOW CORE SLAB 1000 mm HIGH**
Field applications	**COMMERCIAL, INFRASTRUCTURE**
Element dimensions	**H 500, 600, 700, 800, 900, 1000 mm**

Casting process

U panels

Product name	**HOLLOW CORE SLAB 1000 mm HIGH**
Field applications	**COMMERCIAL, INFRASTRUCTURE**
Element dimensions	**H 500, 600, 700, 800, 900, 1000 mm**

Casting process

HOLLOW CORE SLABS

Product name	HOLLOW CORE SLABS
Field applications	SOCIAL, RESIDENTIAL, COMMERCIAL, INDUSTRIAL, INFRASTRUCTURE
Element dimensions	H 80, 90, 100, 120, 150, 160, 200, 220, 250, 265, 300, 320, 400, 450, 500, 600, 700, 800, 900, 1000 mm

Hollow core slabs up to 500 mm, 1200 mm wide (Slipform System)

Hollow core slabs up to 520 mm high 1200, 1500, 2400 mm wide (Extruder System)

Hollow core slabs for walls and floors up to 120 mm high, 600 and 1200 mm wide (Nano Extruder System)

Hollow core slabs for rooves

Hollow core slabs for parking structure

Hollow core slab – a flexible concrete element for all construction applications

Hollow core slabs – flexibility of use

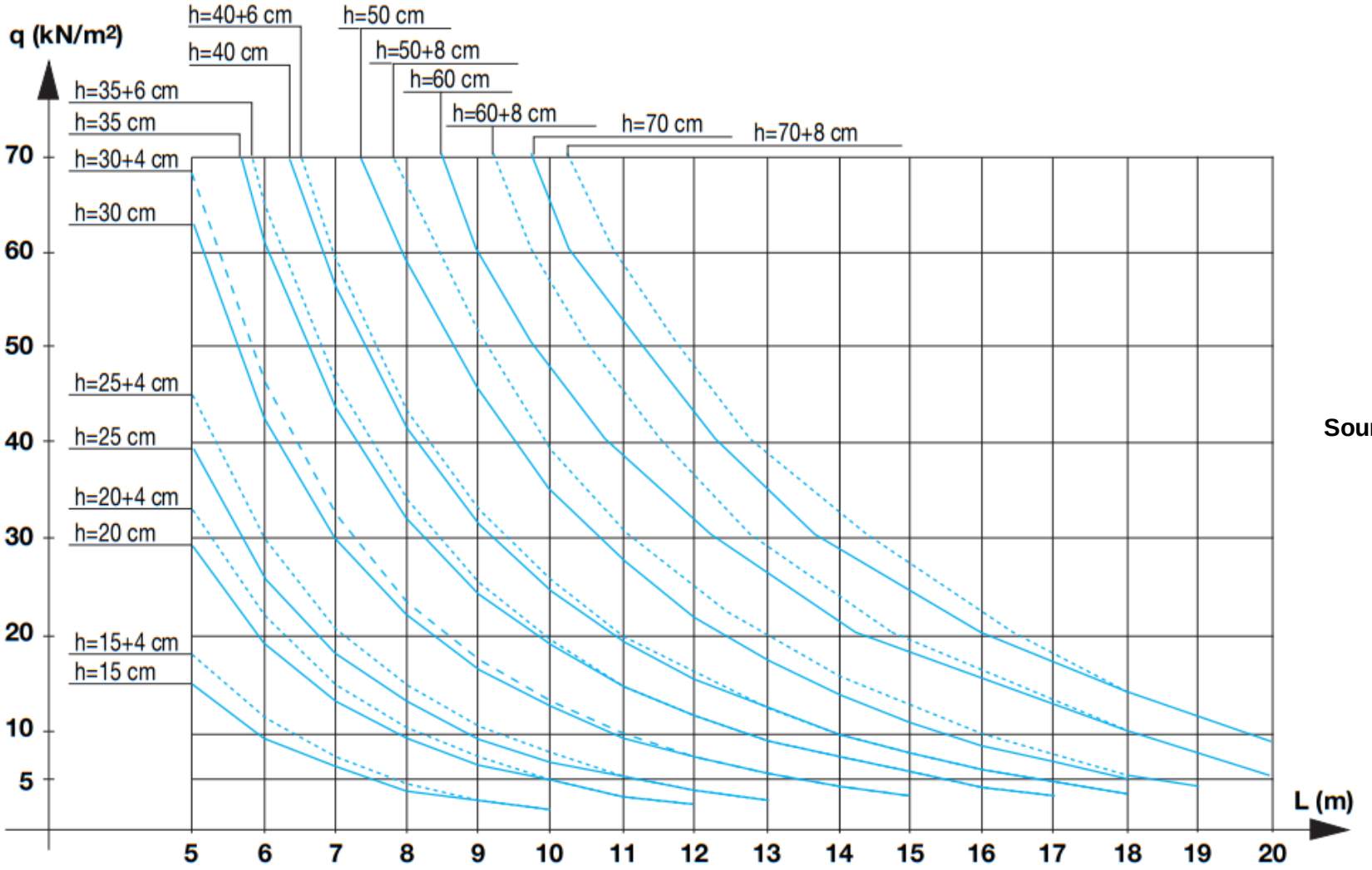
Building Housing projects

Housing projects

Building Commercial projects

Building Industrial projects

Hollow core slabs – wide range of performance

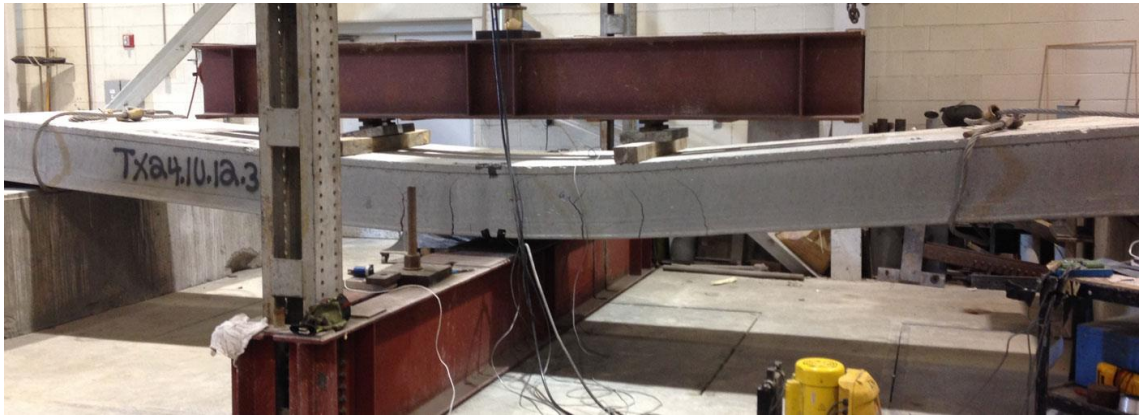


Source: Nordimpianti

Typical Bearing Capacity diagrams for different thicknesses of slabs

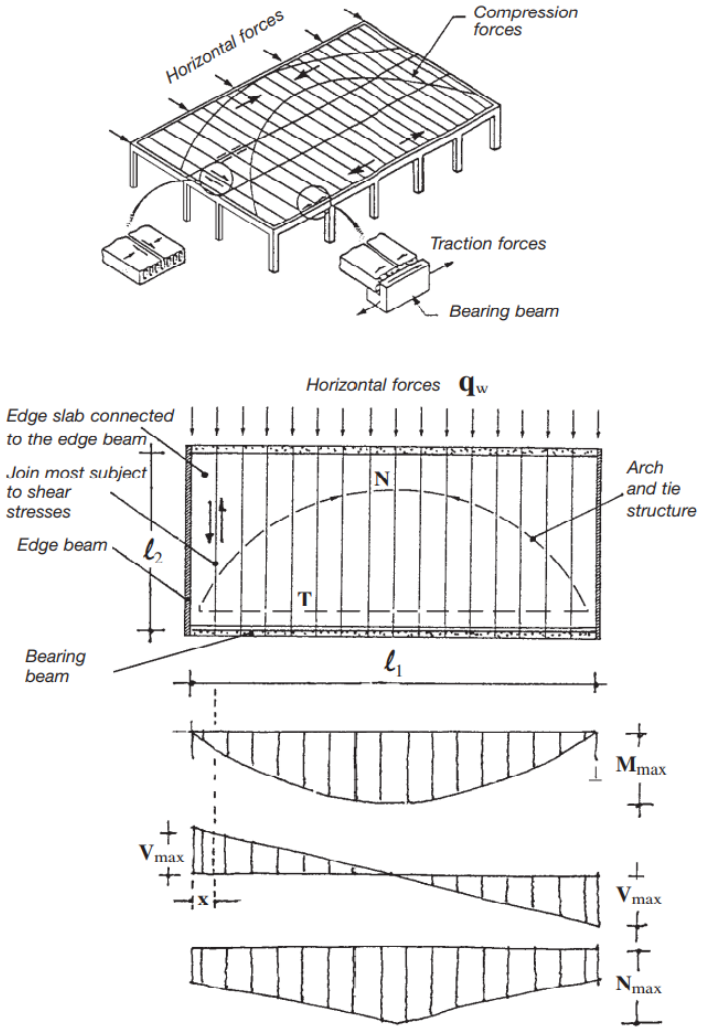
Hollow core slabs – Structural performance and seismic behaviour

Ductile behaviour on site test



Ductile behaviour laboratory test

Diaphragm behaviour of HCS floor

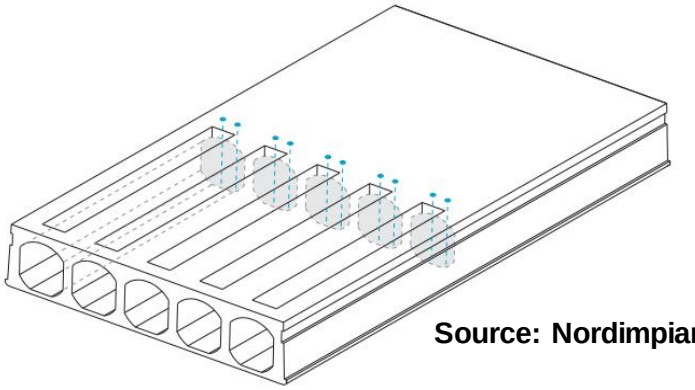


Source: Nordimpianti

Ductile behaviour on site test

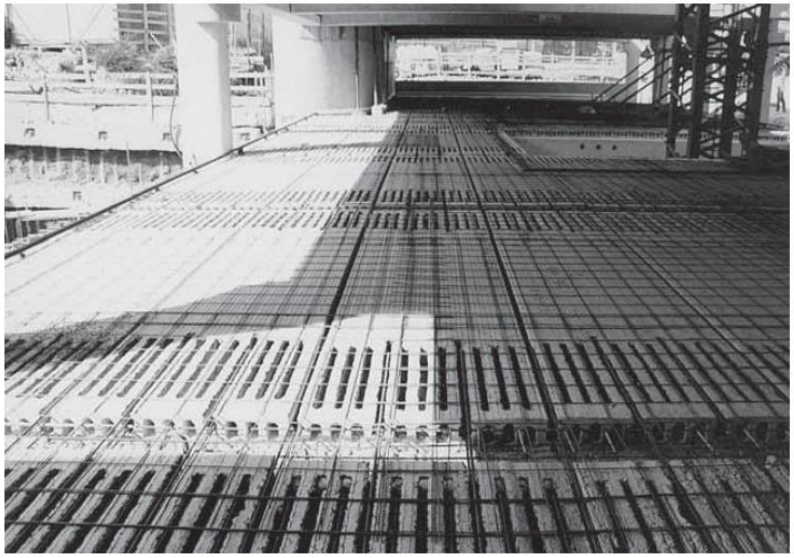
Hollow core slabs – Structural performance and seismic behaviour

Toothed profile detail



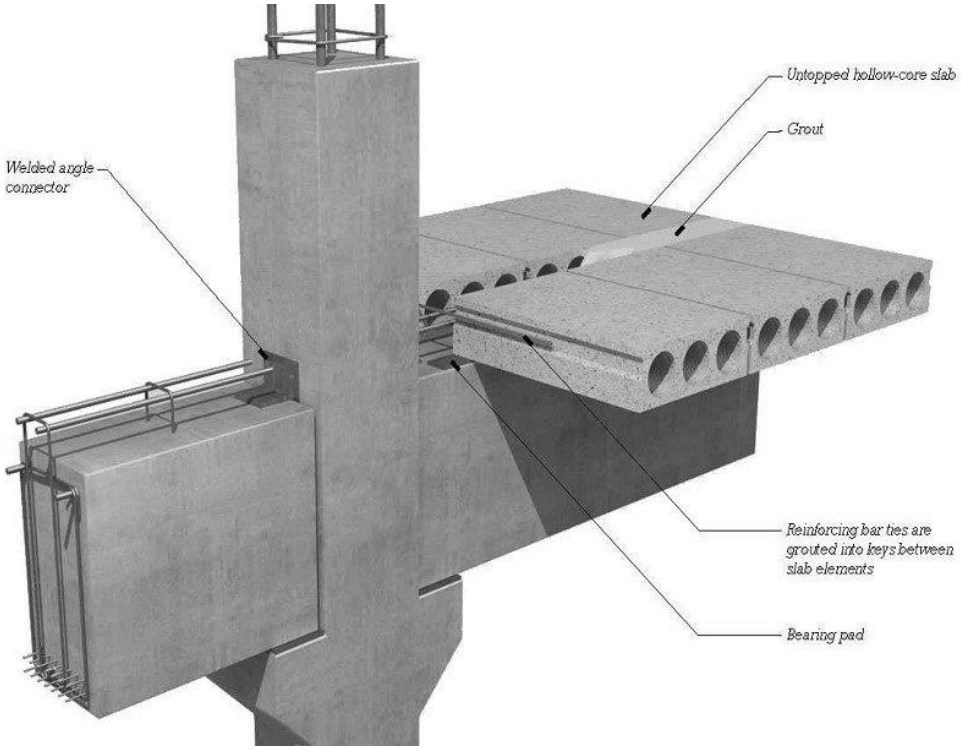
Source: Nordimpianti

HCS with toothed shear key installation

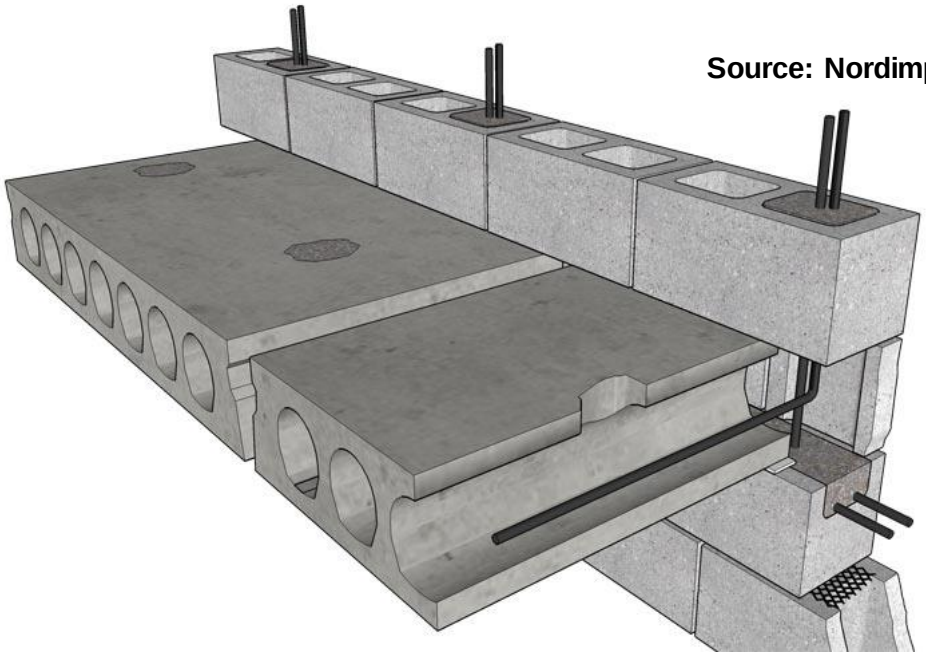


Diaphragm behaviour of HCS floor

Hollow core slabs – Connections with other structural elements



Typical connection in a column-beam frame



Source: Nordimpianti

Typical connection in a bearing wall boxed system

Hollowcore slabs – Connections with other structural elements

Source: Nordimpianti

- Floors supported directly on the wall

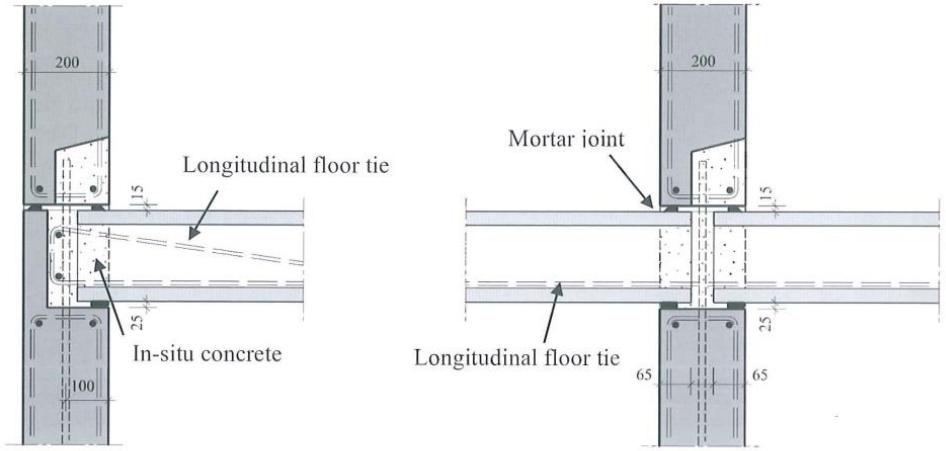


Fig. 7.30: Wall-to-floor connections at intermediate load-bearing walls and hollow-core floor elements for building up to maximum 10 storeys.

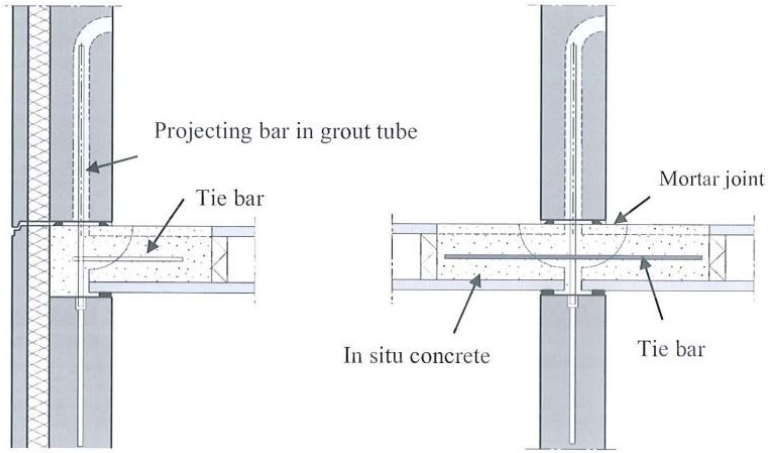
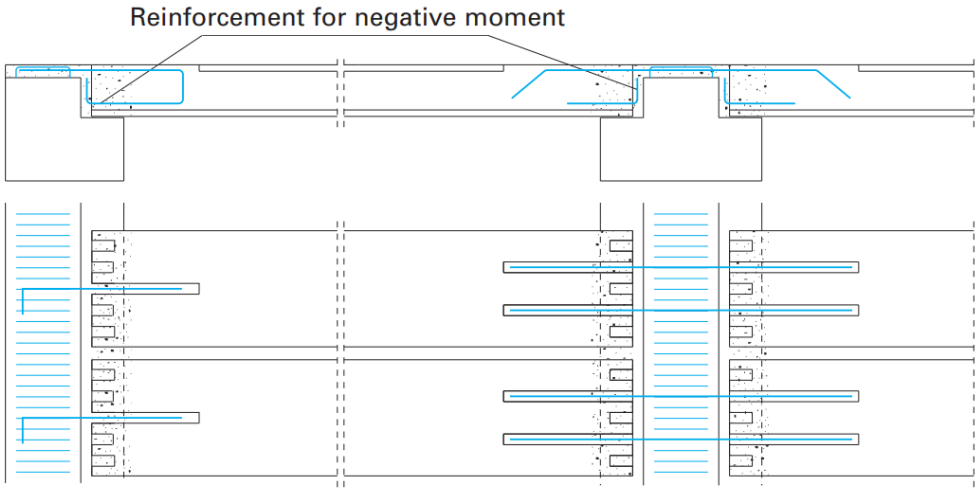


Fig. 7.31: Typical connection between wall and floor for buildings higher than 10 storeys

Typical connection in a column-beam frame

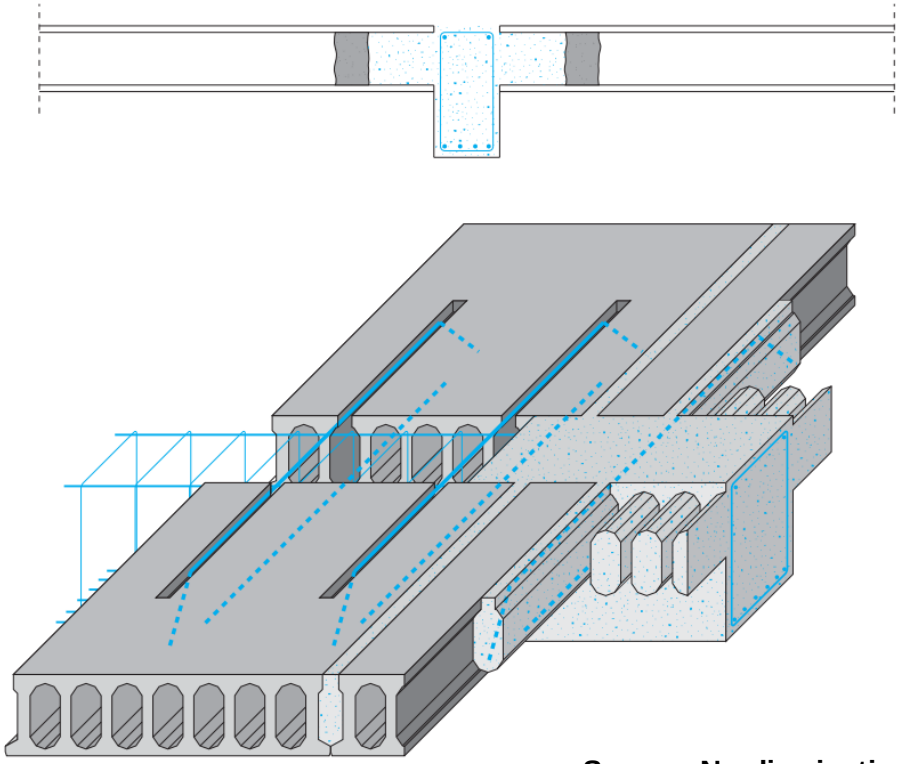
Typical connection in a bearing wall boxed system

Hollowcore slabs – Connections with other structural elements



Hollow core floor in continuity on an inverted T beam.

Continuity in adjacent hollow core slabs
on full precast beams



Source: Nordimpianti

The beam-floor connection with a clear span

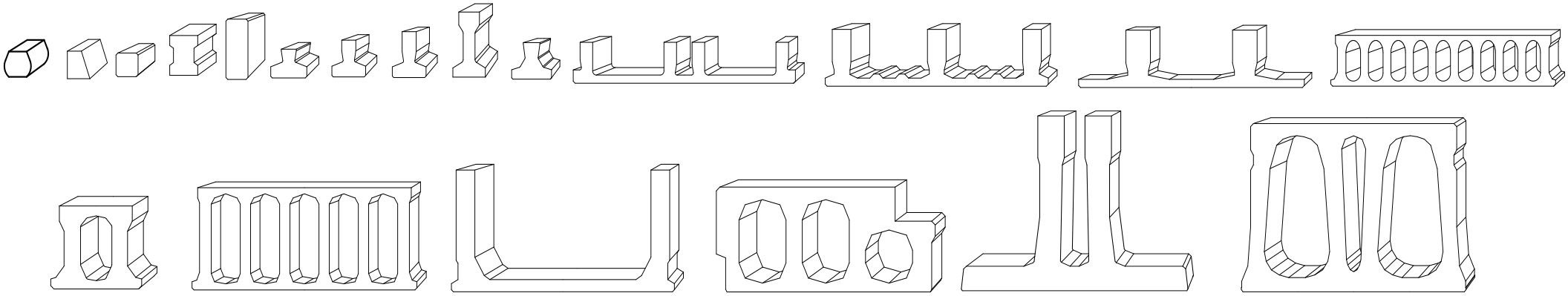
Continuity in adjacent hollow core slabs
on cast in situ beams

All these concrete elements can be produced by our machines:

Slipformer SF

Extruder EVO

Wet casting WF



World-wide Technology

nordimpianti

first technology
better. industrial. machinery.

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Thank you for your kind attention!