

## Post Tensioning Systems

Soprel uses the well proven International system developed by DYWIDAG-Systems International (DSI) of Munich, Germany. The DSI system is approved by the European Technical Approval (ETA). Such tests are an additional guarantee of excellence and competence in this field.



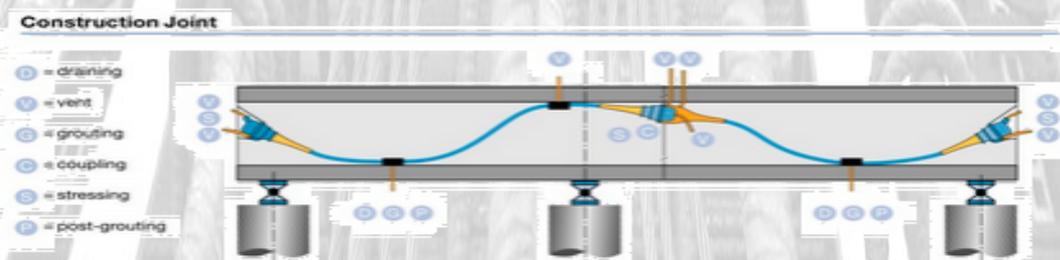
This new technology enhances concrete strength under both compressive and tensile stresses. It delivers the desired prestress force, durability and stiffness. As an engineering solution, post-tensioning is designed to exacting standards and code requirements.



Soprel has shown an excellent record and offers increased reliability. PT is widely used in the construction field including: buildings, bridges, parking structures, repair, rehabilitation and strengthening, rock and soil anchors, and slab on ground.



In bonded systems, two or more strands are inserted into a metal or plastic duct that is embedded in the concrete. The strands are stressed with a large, multi-strand jack anchored in a common anchorage device. The duct is then filled with a cementitious grout that provides corrosion protection to the strand and bonds the tendon to the concrete surrounding the duct.



## Advantages

- Allows slabs and other structural members to be thinner.
- Reduces or eliminates shrinkage cracking therefore no joints, or fewer joints are needed.
- Rebar in floor elements is reduced.
- Decrease dead load reduces rebar and concrete in columns and foundations.
- Reduction in building height decreases the cost of building cladding, vertical mechanical/service elements, and rebar and concrete in shear walls.
- Improve seismic behavior.
- Reduces deflection and vibration.
- Longer spans and fewer columns give greater flexibility in floor layouts in office/residential buildings and better lighting in parking garages which enhances personal safety.
- Lower overall maintenance and lifecycle costs of the structure.
- Potential credits for Green building design and construction.

## References



Verdun Heights



The Skyline



Point A



Abdel Wahab 618



Kweit Tanks



Choueifat Mall



The Quarter / 3DS



Sky Towers



Sursock



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