



DSI References

### Reference Details

**Owner** Prague Highway Authority (RSD Praha), Czech Republic +++  
**General Contractor** SSZ Praha (Stavby silnic a zeleznic), Prague, Czech Republic +++  
**Subcontractor** SMP-CZ, Prague, Czech Republic +++  
**Consultant** PONTIKA Karlovy Vary Ing. Prochazka, Czech Republic

**DSI Unit** SM7 A.S., Prague, Czech Republic – Supplier of the Post-Tensioning System / DSI Austria, Elsbethen/Salzburg, Austria  
**DSI Scope** Supply of 16t of DYNA Grip® Stay Cables, 30t of DYWIDAG-Post-Tensioning Tendons MA 6809, ZR 6805, MA 6805 and Couplers R 6809; technical assistance



### Stay Cable Bridge over the Ohre River in Karlovy Vary

Traffic has been growing continuously in the well-known spa city of Karlovy Vary (Carlsbad). In order to improve the infrastructure, an additional bridge over the Ohre River was built in 2007. This stay cable bridge has created a direct connection between the outskirts and the city center as well as the spa promenade. In the autumn of 2006, the company SMP-CZ in Prague was awarded a contract to build the new 128m long stay cable bridge.

As an additional partner for this project, SM7 A.S. in Prague, DSI's licensee for the Czech and Slovak Republics, supplied all of the required stay cable and post-tensioning systems. SM7 A.S. is the market leader for the production and supply of Post-Tensioning Systems and Geo technical Products in the Czech Republic.

SM7 A.S. supplied and installed 16 DG-P12 DYNA Grip® Stay Cables as well as 16 DG-P19 DYNA Grip® Stay Cables with 12 and 19 strands respectively. All cables were supplied with triple corrosion protection. The 32 stay cables were anchored at the bridge deck and at each pylon. The DYNA Grip® System makes it possible to permanently and simply monitor the condition of the entire stay cable system. In addition, the DYNA Grip® Stay Cable System is characterized by the fact that individual strands can be replaced easily and quickly whenever necessary.

The Stay Cable Systems developed by DSI correspond to international requirements of the Post Tensioning Institute (PTI), the Fédération Internationale du Béton (fib) and of CIP/Setra. The 15m wide bridge deck was built using a gantry/scaffold. SM7 A.S. supplied and installed all of the Post-Tensioning Tendons and carried out the tensioning works. 20 DYWIDAG MA 6809 post-tensioning tendons with 9x0.62" strands were used for the longitudinal prestressing of the bridge. Four DYWIDAG Post-Tensioning Tendons were pushed over the entire length of the bridge in one piece. In addition, 16 Post-Tensioning Tendons were coupled using a type R 6809 coupler in the bridge deck and post-tensioned.

Transverse post-tensioning of the bridge was carried out using 223 DYWIDAG Post-Tensioning Tendons with 5x0.62" strands in each. All tendons incorporated a ZR 6805 anchorage on one side and an MA 6805 anchorage on the other side. Furthermore, the two pylons of the stay cable bridge were also post-tensioned using DYWIDAG type MA Post-Tensioning Tendons with 9x0.62" strands. The total quantity of DYWIDAG Post-Tensioning Systems amounted to over 30t.

The important infrastructural project was completed on schedule to the full satisfaction of the owner, the Prague Highway Authority (RSD Praha). The bridge was opened to traffic in November 2007 in the presence of representatives of the Highway Authority, the municipality and the companies involved.

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