

## BOOKSTACK FOR BADEN STATE LIBRARY Karlsruhe (Germany)

### NEW BUILDING

<b>Client:</b>	Vermögen und Bau Baden-Württemberg, Karlsruhe
<b>Architects:</b>	Schweger Associated Architects GmbH, Hamburg
<b>Our services:</b>	Full structural design Establishing the basis Preliminary design Final design Approval documentation Execution drawings Preparation of contract award Earthquake engineering
<b>Brief description:</b>	<p>Construction of a new bookstack building for storage books in aisle arrangement</p> <ul style="list-style-type: none"><li>- 4-storey reinforced concrete framework</li><li>- rectangular layout</li><li>- fully enclosed concrete structure with long, load-bearing and stiffening reinforced concrete hollow walls, subsequently filled with concrete</li><li>- mainly precast concrete elements</li><li>- total useful floor area of 3,000 m<sup>2</sup></li><li>- deep foundation with bored piles due to challenging foundation soil and high live loads in bookstack (12.5 kN/m<sup>2</sup>)</li><li>- 100 reinforced concrete bored piles with lengths of 18 m and diameters up to 70 cm</li><li>- installation of a geothermal system in the area of the bored piles and the floor slab to generate energy for heating and cooling</li><li>- prestressed tie-beam ceilings (double-T slabs) as main supporting structure for the roof due to high live loads</li><li>- nearly regular grid with ceiling spans of up to 14 m with semi-finished parts and additional in-situ concrete</li><li>- preparation for later building extension</li></ul>
<b>Completion:</b>	2013



Book storage shelf systems



Technical room for building air conditioning