

ITALY: TRANSPORT AND INSTALLATION OF TWO BRIDGE SECTIONS 1250T EACH

PROJECT	EQUIPMENT	WEIGHT
CIVIL	SPMTs	1 250 TON EACH

Trento Provincial Government in northern Italy commissioned a road bridge over the A22 Brennero motorway, linking the Milan- Rome motorway to the Austrian border. On June 2008 Fagioli were called upon to install and position two bridge sections to pass over the A22 highway in the North East of Italy. The installation operation was performed between the night of the 28th and 29th of June 2008 and it can be divided in three steps:

Stage 1 – Lifting of the bridge sections onto Fagioli Self Propelled Modular Transporters (SPMTs)

Stage 2 – Movement of the two sections close each other in order to allow the connection

Stage 3 – Lowering of the two section onto their supports

The two bridge sections, weighing 1250t and measuring 114m long, 23m wide and 5,3m high, were assembled parallel to the existing traffic, in areas on either side of the motorway. They were built on temporary 13m high tubular metal towers and welded together. The parts had been transported to the worksite by conventional means and lifted into place to form the two main sections. Once all the sections were checked and in place on their temporary supports, Fagioli trailers were positioned underneath in order to load the two sections.



The two sections were secured by the Spmt's and safely loaded. The extensive work before installation involved physical movement and stability studies, and risk assessments of possibilities as unlikely as a vehicle accidentally running off the road and on to the worksite.

Reports were issued to all parties, including Autostrada del Brennero (the motorway company). SPMTs modules used to move the bridge sections were a combination of **122 axles lines and 6 PPU's**. Fagioli mounted a custom-built metal substructure, and a cross beam that came into contact with the underside of the bridge section, on each SPMTs group. Each group of SPMTs was manoeuvred by a single operator

with a joystick remote control. The steering movements were preprogrammed in the SPMTs electronics. When precisely in place under the bridge sections, the SPMTs were raised using their hydraulic suspension system. Fagioli were able to lift and position the sections within a few millimetres, enabling the welding of the connection points and the final joint of the two sections. The entire operation required only a single night's road closure.

The actual rotation and positioning operations carried out by the Fagioli team began immediately at 10pm and took about four hours, with the SPMTs being removed after the entire weight of the bridge sections had been completely lowered onto the permanent concrete piers. **Fagioli won an ESTA award for the "Transport Job of The Year Over 120 Ton" category in 2010**

