

Başbüyük Marmara University

Hospital

Istanbul - Turkey



WORK/ ACTIVITY Structural Components of Buildings Seismic Devices



DESCRIPTION

The Marmara University Başbüyük Training and Research Hospital is a large complex (112.440 sqm footprint) which consists of 16 different building blocks of various heights and a garage block. It is a reinforced concrete frame structural system built in 1991. After a previous seismic strengthening operation in 2002, a modern approach to Base-Isolate the structure was proposed to fulfil the Immediate Use Performance Level conditions. FPC Italia and Freysas were engaged to design the base isolation system, manufacture and deliver the isolators, as well as install them in place. The supply includes 362 Lead Rubber isolators of 650 – 1000 mm diameter and 325 free sliding bearings, specified dependent on the superstructure geometries and loads. The design movement of all the devices is equal to +/-380 mm. The Lead Rubber isolators, designed according to European Standard EN 15129, have been successfully tested at Eucentre Laboratory located in Pavia (Italy). Freysas's scope also includes installation by cutting the existing columns and walls. Base isolation is often the best solution for the seismic protection of important buildings like hospitals in high seismic areas, such as Turkey.

RANGE

DEVICE	DIAMETER (mm)	TOT. DISPL. (mm)	QUANTITY
LRS	650	760	127
LRS	750	760	92
LRS	800	760	97
LRS	850	760	36
LRS	1000	760	10
DEVICE	FORCE (kN)	TOT. DISPL. (mm)	QUANTITY
NTm	2017 / 15564	760	325

PROJECT

Agency : Freysas
Customer : Zeksan Begum
Year : 2013 – 2015



CUTTING OF THE PILLAR WITH THE WIRE SAW MACHINE

