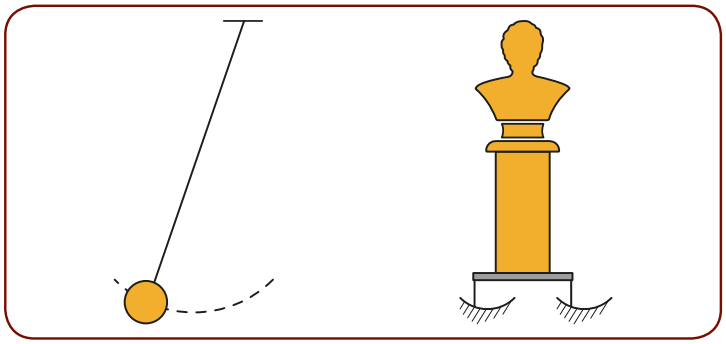
FIP INDUSTRIALE
leading technologies

FIP INDUSTRIALE SpA
via Scapacchiò 41, Casella Postale 97
35030 Selvazzano (PD) • ITALY
T +39 0498225511 • F +39 049638567
fip@fip-group.it
fipindustriale.it

FIP INDUSTRIALE FOR ART

Cultural sensitivity and interest for the world heritage have led **FIP Industriale** to develop a *new group of seismic isolation* systems - called ISOLART® - specifically designed for the seismic protection of works of art. The latter is achieved by decoupling the motion of the work of art from the earthquake-induced motion of the building that contains it.

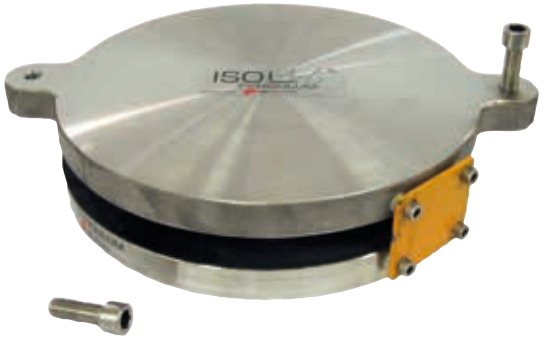
Further to ISOLART® *SMA*, based on the super-elasticity of shape memory alloys (already used by **FIP Industriale** for the first time in the world in 1999 for the seismic protection of the tympanum of the transept of the Basilica of St. Francis in Assisi, Italy) and ISOLART® *FLUID*, this group includes ISOLART® *PENDULUM*, based on the working principle of the simple pendulum: the work of art moves as if it was suspended on a cable.



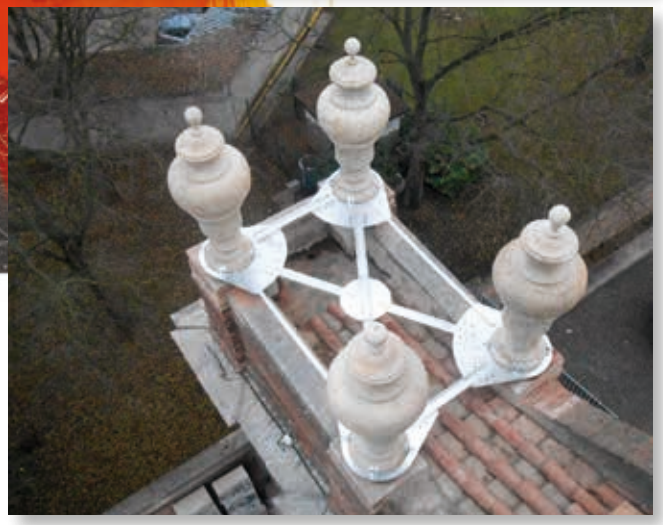
Picture below:

Shake table seismic testing at the University of California San Diego, in collaboration with Padua University and IUAV University Venice.

The 4 t mass simulates one of Michelangelo's Slave sculptures and its basement. The maximum acceleration measured at the base of the statue (i.e. above the ISOLART® *PENDULUM* system) was as little as 14% of the maximum acceleration transmitted by the table.



ISOLART® *PENDULUM*



ISOLART® *PENDULUM* has recently been employed for the seismic protection of the Bust of Francesco I d'Este by Gian Lorenzo Bernini in the Estense Gallery in Modena, Italy, and for the protection of the pinnacles of a three-arched masonry city gate, in Ferrara, Italy (Picture above).