

Deimos Rotating Art Installation

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INDUSTRY	PRODUCT	COUNTRY	PROCESS
Fashion & Culture	PRT2 Precision Ring Guides and Ring Segments	Czech Republic	Manufacturing

Task

When special purpose machine builder Deimos s.r.o. were presented with the task of rotating floors in a structure little did they realise that they would be creating a massive master piece that would be on view to visitors at a UNESCO site in the centre of Prague.

A statue of world famous writer Franz Kafka designed by Czech sculptor David Cerny had the face split into 42 floors that all had to rotate and come together in one moment to reveal the writers face in full. Deimos needed rotating systems that could act as a large support bearings for the floors, be corrosive resistant and easy to drive. Original thinking was to have a much larger diameter support bearing so any smaller bearing would need to have adequate load capacity, be able to incorporate a drive and offer good rigidity. Given the tight time scale involved in putting together the whole structure a system that was easy to install was vital.

Solution

Stainless steel HDRT rings 41 in total 40 x 1.656m diameter, 1 x 0.896m with mod 8 gear machined directly into the larger rings for driving; a mod 4 into the smaller one. Each ring used 6 x V bearings size 64 to support the load with low maintenance cap wipers fitted over each bearing. To ensure smooth motion each ring had 4 bearings on eccentric studs that could be adjusted to take out any system play on assembly.

Scope of supply

40 x HDRE1656G8SS, 1 x HDRE896G4SS plus 246 x THJR64 bearings, 246 x CW64 cap wipers.

Result

A low maintenance solution that performs within the structure in all weathers and was easy to install. The choice of material for the HDRE rings is critical if a long life and a high level of corrosive resistance is to be achieved; specific attention being paid to the ring surface finish. V technology requires only small amounts of lubrication to be effective and given the location of the floors it is not expected to have to relubricate for many thousands of rotations.

“HepcoMotion were the only supplier able to fulfill the special technical requirements we needed to ensure smooth motion. The delivery of the 41 rings was also very competitive“ says Jan Kislinger, CEO at Deimos s.r.o. who managed the project from start to finish.

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