

Cleanroom crane with semi-automatic and pendulum damping system

The company:

ALTMANN GmbH is a world leader in the development and manufacture of cleanroom cranes. The company from the Bavarian town of Alabaching has already designed, produced and assembled several spectacular customised cranes for a wide range of industries. These include the largest cleanroom cranes in the world to date: two double-girder overhead travelling cranes, each with two synchronised each with a lifting capacity of 15 tonnes and a span of 30 metres.

This year ALTMANN GmbH is applying for the Cleanzone Award 2022 with a product that seems to be a paradox in itself.

The product solution:

The semi-automated cleanroom crane with pendulum damping presented at this award is currently unrivalled in the cleanroom world.

Particularly high demands are placed on the control and programming of semi-automatic ALTMANN cranes. Since the operator must be able to intervene in the process at any time and the software must only allow logical commands in order to human error, the control system must permanently monitor the status of the crane and the process.

Accurate to the millimetre and vibration-free thanks to pendulum damping

The semi-automatic cranes from ALTMANN are supplemented by a further dimension in combination with the innovative technology of electronic pendulum damping. This pendulum damping ensures that no vibrations caused by inertia occur or that corresponding compensating movements have to be carried out by the crane operator - and this neither during acceleration nor during braking. This prevents the load from swinging. It is particularly noteworthy that this happens

regardless of the speed and hook position of the load. At the same time, the risk of accidents due to swinging movements is reduced to a minimum both when moving the load and when stopping. Another plus point is the avoidance of increased abrasion, which is unavoidable with every acceleration and braking of the crane. The thus reduced particle discharge is quite essential in cleanroom environments. Compliance with the requirements of ISO class 5 is thus guaranteed.

Thanks to the electronic pendulum damping, the crane hits the desired target coordinates with pinpoint accuracy. This enables the crane to work much more precisely and, in particular, faster. Without pendulum damping, the exact positioning of the object costs a lot of time, requires both rest and skill, and also makes everyday work much more difficult.

In many cases it is also very important to ensure the pendulum-free, pinpoint stopping of a load and not to exceed the desired target point, otherwise damage can occur to the usually precious load or the target object. When positioning objects without pendulum damping, however, there is no guarantee of this. In addition, the pendulum effect of the load increases the risk of accidents for the persons involved.

All in all, the ALTMANN cleanroom crane with semi-automatic and pendulum damping offers a whole range of highly innovative features that make it ideal for many heavy-duty transport tasks in cleanroom environments.

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