

Speed and Safety in the Smallest Space

Modern, vertical storage-elevator systems are widely used in industrial manufacturing, commerce and administration. The advantage of this system lies in the optimal use of storage space. It makes no difference whether small screws or several tonnes worth of engine blocks need to be stored, everything is optimally organized according to height. So from the smallest amount of space you get the maximum amount of storage. One of the leading companies in this field is "Megamat", from the German region of Neuburg/Kammel. With their new vertical storage system, the Megalift FSE, Megamat has utilized the most modern automation and safety technology from CEDES.

Quick, safe and compact

The youngest child to come out of the house of Megamat is called the Megalift FSE. The storage-elevator operates according to the proven principle of "goods-to-man". It distinctly improves job performance and at the same time considerably reduces physical strain for the operator. The maximum payload for the standard version is 70 tons. And with a maximum height of 20 meters, Megalift FSE can also be installed over multiple stories and thereby offers a great deal of potential storage space.

The name FSE stands for Fast, Silent and Ergonomic: and the new storage-elevator is not just more user-friendly and quieter than its predecessor. Above all it is fast. Compared to other elevator systems, cycle times have been shortened by up to 25%. An important contribution to this performance increase is provided by the automation and safety innovations made by the Swiss optical sensor specialist CEDES.

Two light curtain systems

Short cycle times mean high transit speeds for the loading/unloading tray. So the requirements for the sensors are

equally high. The measuring light curtain Object100, whose acquired data is needed for height optimized storage, can handle these higher transit speeds. With a sample rate of 40 μ s per beam, Object100 can even measure drill bits with a diameter of just 5 mm. The safeguarding of the loading/unloading area is carried out by the Safe200 safety light curtain. Safe200 satisfies safety category 2, in accordance with the European norm EN 954-1. But the decisive factor in choosing these two light curtain systems was not merely the performance they offer: Megamat's design engineers were won over by the extremely compact dimensions of just 15 x 20 mm that the light curtains boast. Both Object100 and Safe200 are integrated perfectly in the loading / unloading area of the Megalift FSE, and cause no limitations to space or functionality.

One controller for everything

Both light curtain systems are monitored by the SafeC 200M safety controller. Furthermore, all other safety relevant devices, such as emergency stop buttons and door interlock switches, are also monitored by SafeC 200M. For Megamat this meant a welcome spurning of the multitude of relays which up to now were necessary for each individual safety component. For this reason, the laborious and error-prone cabelling of all the devices and relays has also been eliminated. The SafeC 200M then sends the height information through the storage-elevator controllers' CAN-Bus.

Electronic search aid

In order to ease the workload, other CEDES components have also been used. The operator is supported during commissioning by a "pick-by-light" system. The objects needed are displayed in the x and y axes on the loading/unloading tray using a LED display bar and a 7-segment digital display. This reduces the commissioning time and substantially reduces the likelihood of the wrong component being unloaded.

Conclusion

With the Megalift FSE, Megamat have set new standards in the field of storage-elevator systems. Ergonomical, well-thought out and innovative technology guarantee the customer a flexible and economical solution, which pays for itself in no time. The safety and automation technology from CEDES provides an important contribution to the performance and safety of the system.

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The Megalift FSE



CEDES components help ensure that the "goods-to-man" principle operates reliably and safely.

Press Release

CEDES

More than you expect!



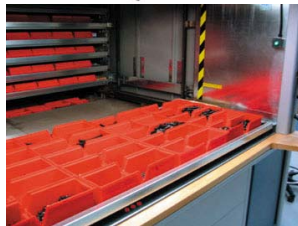
The SafeC 200M safety controller can monitor up to 13 safety components simultaneously (category 2 in accordance with EN 954-1).



The compact Safe200 safety light curtain (yellow) takes over the safety monitoring at loading / unloading areas. For optimal storage, the Object100 measuring light curtain (red) acquires the height of the object in the loading area.



The LED display bar and 7-segment digital show the user which object should be taken from which tray.



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