

Energy recovery in vertical lift system thanks to the latest inverter technology from Mitsubishi Electric

The sophisticated Hänel EcoDrive® lift system for intralogistics tasks uses the compact Mitsubishi Electric FR-A741 frequency inverter with integrated energy recovery function.

The Hänel Lean-Lift® is a fully automatic, height-optimised storage system which makes the best possible use of the storage space available. In order to increase energy efficiency, the installation can be expanded by adding the optional EcoDrive® function. If the FR-A741 with integrated energy recovery function is used, it will convert the kinetic energy produced during the downward movement of the extractor (load-carrying device) into electrical energy and feed it back into the electrical supply system. From there, it can be used cost-efficiently at another location, e.g. by other Lean-Lifts® within a group. There are definite benefits to be gained in terms of saving energy and reducing costs which will soon become evident: according to the travel capacity of the lift, up to 40 per cent of the energy originally required for the downward movement can be recovered and fed into the power supply system. CO2 emissions can also be reduced as a result.

Its high level of performance makes the FR-A741 ideally suitable for actuators or for controlling high-performance machines with regenerative torques, e.g. for applications involving vertical and horizontal movements, for conveyor systems, centrifugal separators, test equipment or winding machines. As the frequency inverter and energy recovery unit are installed in a shared housing as standard, the concept allows smaller, more cost-effective drive systems to be used along with a single, space-saving switching cabinet. So there are no additional wiring costs either. Compared with the situation when an external energy recovery unit is used, the electrical wiring can be reduced by up to 60 per cent and the installation can bring a saving of up to 40 per cent on the space required according to the performance class in each case.

The EcoDrive® function is being used successfully worldwide in hundreds of Lean-Lifts® in sectors such as the medical, electrical, automotive, aviation and pharmaceutical industries as well as in machine construction and mail order and wholesale trading.

Photos Captions:

Picture 1: In the Hänel EcoDrive®, the FR-A471 with integrated recovery function converts waste energy and feeds it back into the electrical supply system.

Picture 2: The EcoDrive® energy-saving function, based on the Mitsubishi Electric FR-A741 converter, is being used successfully worldwide in hundreds of Lean-Lifts® within a wide range of industries.

About Hänel GmbH & Co. KG

For more than 50 years, the name "Hänel" has stood for high quality products for use in storage applications. Today, Hänel Büro- und Lagersysteme is one of the world's leading manufacturers of carousel-type shelving and vertical storage lift systems. Products such as the Rotomat®, Lean-Lift® or Multi-Space® have set standards in automated storage technology. These dynamic storage systems are constructed based on the carousel and conveyor principle, i.e. goods are brought to the operator and not the other way round. Due to the compact designs used, storage space can be maximised within confined spaces while utilising the whole height of the facility. Modern Hänel microprocessor control systems enable permanent and precise monitoring of stock. They can communicate with the customer's EDP system or be used as independent warehouse management systems.

Back in 1957, Hänel was the first manufacturer in Europe to carry out the mass-production of ferris wheel-type lift systems based on the paternoster principle. Today, Hänel products are produced at three plants. Successful companies all over the world have chosen the high-quality leading-edge technology made by Hänel.

Through its numerous inventions, Hänel Büro- und Lagersysteme has made a significant contribution towards the success of carousel-type shelving and vertical lift systems. That success serves as a further incentive for Hänel engineers to continue their work on the further development of future-oriented intralogistics solutions.

Further information:

www.haenel.de

