

Case Study

# Controlled Environment





# Customized solutions

## Customer and task

Our customer Merck is committed to changing the world through science and technology. Employing 50,000 people in 66 countries, Merck develops and supplies specialized products in the health-care field.

The newly constructed research building required three zones to supply, prepare, manage, and store pharmaceutical research substances under special storage conditions. Laboratory staff required access to the refrigerated warehouse from a room temperature area, and a redundancy system was needed to secure the controlled storage conditions.

## Solution

Kardex implemented a customized solution including three standard Vertical Lift Modules Shuttle XP, modified for chilled conditions. Metal sheets on the Shuttle XPs' trays create subdivisions. Laser pointers and position indicators show an item's exact position and identify the correct product to pick. A refrigeration unit cools the Shuttle XPs and as a back-up, in the event of a fault, a redundant cooling unit with redundant sensors takes over. The air is dehumidified by a drying device to prevent humidity from condensing and icing in the Shuttle XP.

It is now easier to access the stored goods and the Shuttle XPs are clad in insulation panels. This allows operators to access the air-conditioned units directly from a room temperature laboratory.

## Case at a glance

### How we took our customer from task to solution

Merck is a leading science and technology company in the pharmaceutical and chemical industry. Merck KGaA requested help with their newly constructed research center in Germany. They wanted to access cool and deep-freeze storage from a room temperature area. Kardex customized a controlled-environment storage solution with a hatch unit in front of an access opening.

Saved 66%  
floor space

Improved  
ergonomics

Created cool  
and deep-freeze  
areas



### Scope of delivery



3 Shuttle XP with thermally decoupled automatic tray extension  
W: 3,650 mm | D: 813 mm | H: 7,950 mm



Power Pick Global warehouse management software  
Laser pointer



3 cooling systems (including redundancy system)  
Drying technology