Purpose
This Application Bulletin provides information about the Automated Storage and Retrieval System (AS/RS), which automatically and rapidly stores and retrieves a large number of objects in a restricted space with optimum management.

Examples of Use
The AS/RS can be used to store or retrieve:
- Electric components
- Electronic components
- Tools
- Paper rolls
- Automobile parts

Machines Related to Application
Transtorage for long-term storage of loads, storage by accumulation.

Names/Types
Transtorage with automatic control:
- Transtorage (for pallets of up to 2000 kg and of more than 40 meters in height)
- Mini-transtorage (for storage of SKU cases < 350 kg)
- Micro-transtorage (for storage of loads < 50 kg) for small parts and files
- Transtorage system with on-board operator and manual control (for storage of pallets up to 2000 kg)

System Options
- Transtorage switch
- Consultation station
- Incoming station
- Outgoing station
- Self-diagnosis and integrated maintenance aid
- Stock-keeping software
- System for picking up different objects or pallets, one by one, side by side, or one behind the other
- Different object sizes requiring check before transport and check before insertion
- Automated guided vehicle (AGV) transfer

Machine in Process
Automatic supply for horizontal or vertical rotary storage.
Application Bulletin

Automated Storage & Retrieval System
Material Handling Machines (continued)

Situation in Environment
An automated storage warehouse may operate at very low temperatures (deep-freezing) and store dusty products.

The electrical equipment is located in two cabinets, one fixed (on the ground) and the other mobile (on the mast). The latter is subjected to high acceleration and, possibly, vibrations. The mechanical attachment of the components must be total. Compliance with sealing, ventilation and, if necessary, heating of the cabinets is mandatory.

Upstream Machines
Roller conveyor, conveyor, carousel (horizontal), trans-shipping system.

Downstream Machines
- Roller conveyor
- Conveyor
- Carousel
- Trans-shipping system
- Exit on accumulation
- Rotary storage
- Transfer table
- AGV
- Lift truck

Operating Cycle

Related Applications
- Positioning
- Weighing
- Bagging
- Palletizing
- Bar code reading
- Optical material identification

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