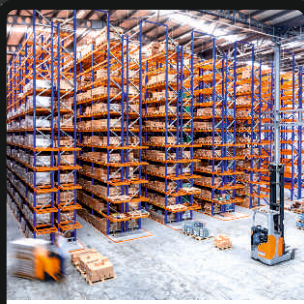# STAMH ®

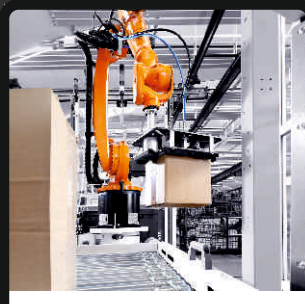STORAGE TECHNOLOGIES & MATERIAL HANDLING

2D SHUTTLE & MULTI SHUTTLE SYSTEM

STORAGE SYSTEMS

AUTOMATION & CONVEYING
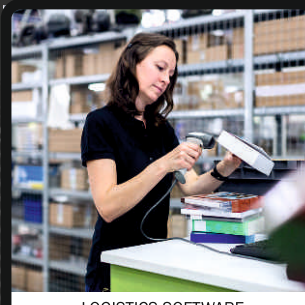

ROBOTICS

WAREHOUSE EQUIPMENT

MATERIAL HANDLING MACHINES

INSTALLATION, INSPECTION, SERVICES

LOGISTICS SOFTWARE

PROFESSIONAL CLEANING MACHINES

SOLUTION FOR EVERY WAREHOUSE

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20
STAMH® years

STAMH® is an engineering company that performs consulting, design and engineering of complex automation and mechanized warehouses, including management software. The territory in which it operates and has its own companies and representative offices is in Bulgaria, Greece, Macedonia, Romania and Serbia and Russia.

Our main products are:

Ÿ Different type of Automated Storage systems for boxes and for pallets including racks, stacker cranes, conveyers and Management system.

Ÿ Vertical Automated Storage and Retrieval system for offce and industrial applications

Ÿ Dynamic roll systems for pallets and boxes, all kinds of roll and belt conveyers and automated sorter systems

Ÿ Mobile racking systems for pallets and long material

Ÿ Palletizers and robocars

Ÿ Warehouse management software WMS

Ÿ Lifting equipment

Ÿ Professional cleaning machines

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Milano

ITALY

Novi Sad

Bucharest

BOSNIA

SERBIA

BULGARIA

MONTENEGRO

Sofia

Skopie

MACEDONIA

» **11500** orders

» **4500** clients

» **21** cuntries

» **20** years

» **150** employees

MULTISHUTTLE SYSTEMS

¢ Multi-shuttle is designed to store, buffer and sequence products between bulk stock and functions like picking and order assembly
¢ The system can dramatically increase speed, accuracy and throughput in warehouses, factories and distribution centers
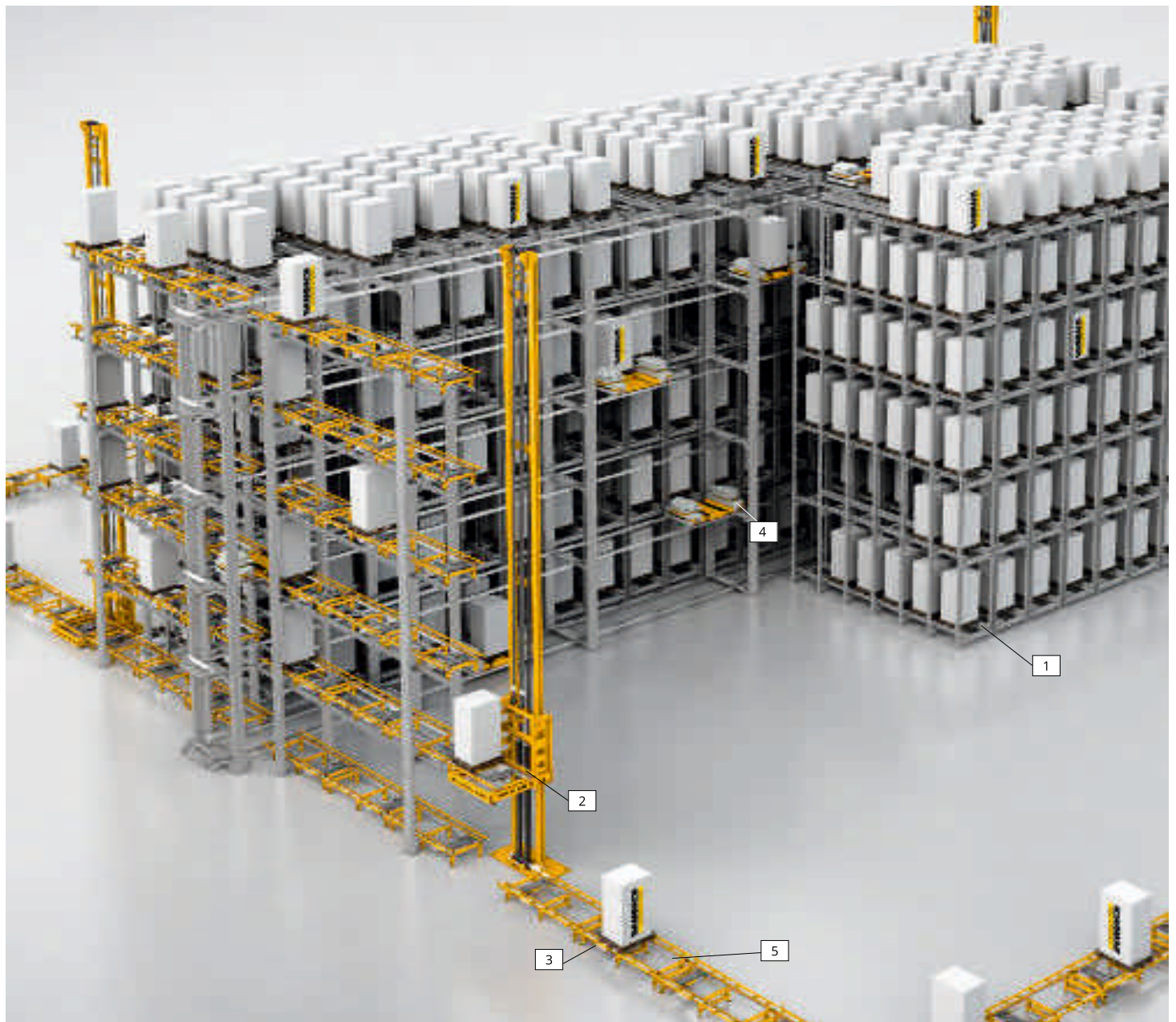

A multi-shuttle system consists of small carts that move along the racks, allowing the retrieval and delivery of containers or boxes with great speed and selectiveness; thus becoming a device that fulfills orders with extraordinary efficiency and efficacy, with permanent inventory update, and tracking of processed orders. The multi-shuttle system may handle box orders, or may be used for picking items, delivering top- class productivity, since its philosophical design is that the product is delivered to man avoiding human movement that adds significant time and inefficiencies

Multi-shuttle system is the next generation modular system, fully automatic for the automation of multi-depth storage of pallets. It is composed by:
Mother shuttle, which moves on rails that are perpendicular to the storage channels, powered by busway at each loading system
Shuttle car, commanded by the mother shuttle via wifi and allocated to the operations in different storage channels, for the automatic collection and storage of pallets.
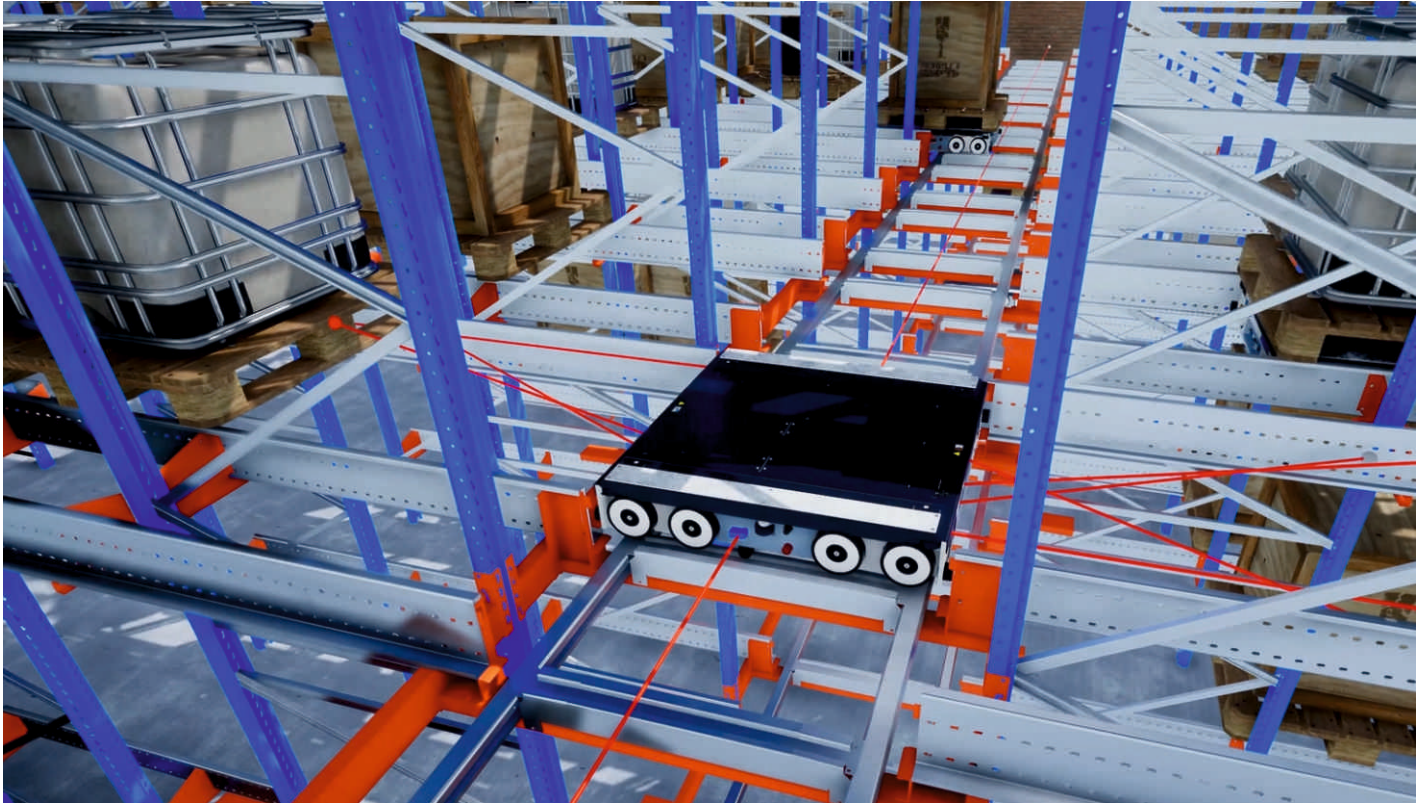
The different system configurations are composed of elevators/descenders for Pallets.

These are intended for the delivery of pallets to the different storage channel for its management by shuttle car, and elevators/descenders for the mother-shuttle. This happens only in configurations where a single shuttle is working on different levels. The management of the entire system is provided by WMS software.

ELEMENTS:
1. Pallet racks
2. Lift for pallets
3. Rails for shuttle car
4. Shuttle car with mother shuttle
5. Roller conveyor

2D SHUTTLE SYSTEM

- Layouts can be adopted to nearly every building situation & different business situations (3PLs). Automation of brown field is easy!
- High storage density obtained through shuttle technology, as less space is used for the handling lane. Perfect fit for frozen environments!
- Single deep and multiple deep areas can be combined, very simple main aisle transfer
- Energy efficient

The 2D shuttle system is a deep lane storage and retrieval system for pallets.

The heart of the system is a carrier able to move on either the storage lanes or on one or more main lanes. In this way the shuttle may change lanes without intervention of an operator or other transporting device.

This highly efficient storage system can be applied in both semi- and fully automated warehouses.

The operation

The 2D pallet shuttle system consists of several shuttles, the specially designed STAMH Shuttle-rack system and the local controlling system (WCS).

The 2D shuttle is a self-powered pallet carrier, which may transport pallets on both the rails of the storage lanes and the rails of the main lanes.

The so-called crossings or intersections between the storage lanes and the main lanes are designed for a smooth transition of the shuttle, loaded or not.

In a semi-automated warehouse, the pallets are received and picked at the frontside of the pallet rack by means of a conventional forklift truck. The orders are issued from the client's WMS to the local warehouse control system (WCS), which among others selects the shuttle to perform the specific task and determines its optimum path.

The occupancy rate of the various storage lanes, the status and operation of each shuttle and an overview of all performed tasks can be consulted on the WCS (HMI) or are transferred to the client's main system

Performance
- Speed 1.2m /second in both directions
- Acceleration 0.5m/second (emergency stop 1m/second)
- Table lift 3 seconds
- Wheel set change 6 seconds (direction change)
- Deceleration : 0.5m/second²

Scalable
- Together with the number of shuttles you can change the performance

Effective
- Even with low building heights, effective solutions are possible

Compatibility
- Interface for the connection of WMS Systems

Industry 4.0 ready
- Pioneering industry 4.0 ready solutions of the future today

- **Industry 4.0 ready**
- Pioneering industry 4.0 ready solutions of the future today

Reliable
- Several shuttles in one system guarantee an increased reliability and availability (redundancy)

Compact
- Reduction of front zones by clever system design (vs stacker crane)

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STAMH®
Bulgaria
tel.+359 700 42 111
office@stamh.com

STAMH®
Austria
tel.+359 700 42 111
office@stamh.com

STAMH®
Italy
tel.+359 700 42 111
office@stamh.com

STAMH® LOG
Macedonia, Albania & Kosovo
tel.+359 700 42 111
office.mk@stamh.com

STAMH®
Russia
tel. + 7 (917) 588 6703
office.ru@stamh.com

STAMH®
Serbia & Bosnia and Herzegovina & Montenegro
tel.+359 700 42 111
office@stamh.com

STAMH® SYSTEMS
Romania & Moldova
tel. +4 0371 302 133
office.ro@stamh.com

STAMH® TECH
Bulgaria
tel.+359 700 42 111
office@stamh.com

STAMH® SOLUTIONS
Bulgaria
tel.+359 700 42 111
office@stamh.com

STAMH® SERVICE
Bulgaria
tel.+359 700 42 111
office@stamh.com

HYSTER-BG
Bulgaria & Macedonia
tel.+359 700 42 111
office@stamh.com

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