Dimark

intralogistics solutions

clever move

parcel | postal | e-commerce | warehouse

INTRALOGISTICS

clever move

WE SPECIALIZE IN DESIGNING, MANUFACTURING, ASSEMBLING, COMMISSIONING AND SERVICING OF **INTRALOGISTICS SOLUTIONS**.

Dimark INTRALOGISTICS

about us

We provide reliable, top quality and innovative systems for sorting, inspection and storage of parcels and materials. We support our customers with knowledge, experience and individual approach from concept to maintenance.

clever move

how we operate

Our solutions can be implemented at any warehouse, distribution center or production plant, either new, extended or upgraded one. We provide optimal solutions at every stage of project execution.

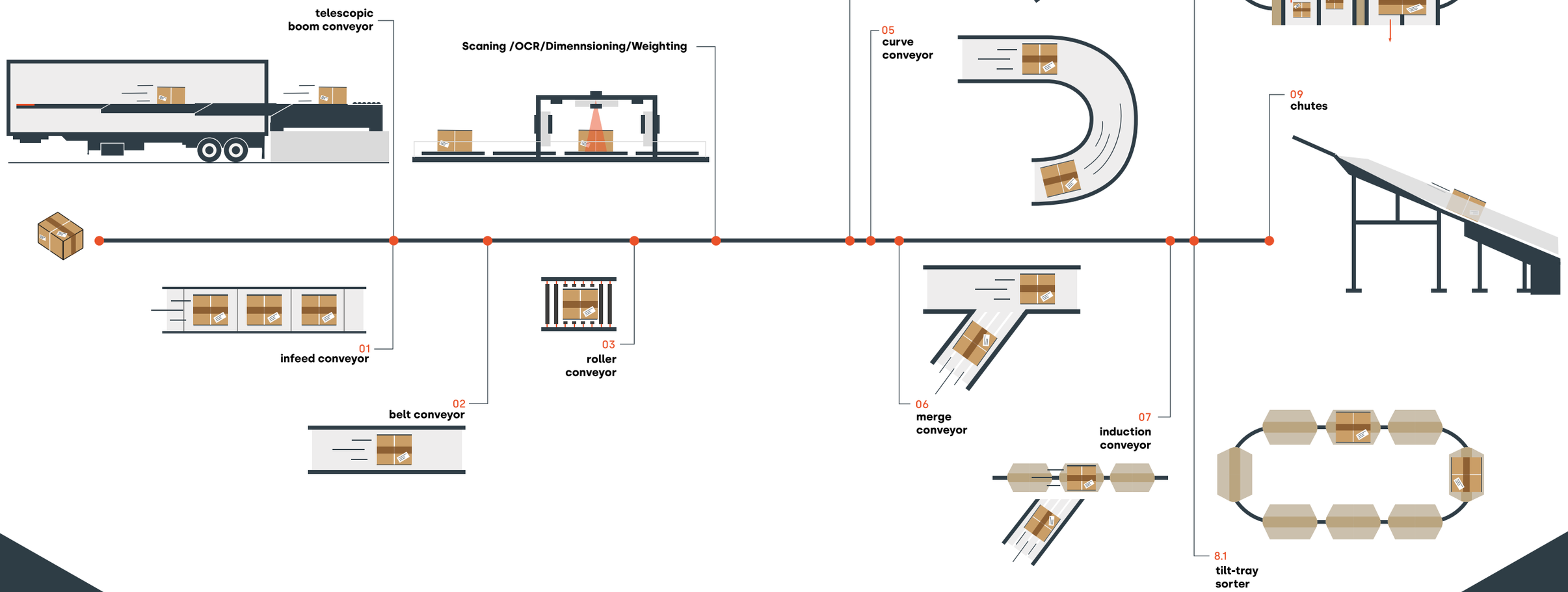
1. Analyzing the Client's needs at the stage of preliminary intralogistics concept;
2. Developing a final design of the System complying with all the needs and requirements of the Investor.
3. Manufacturing all the components of the Systems in Europe, in accordance with the highest quality and environmental standards;
4. Assembly and commissioning of the System in accordance with previously approved final designs, quality and safety norms;
5. Servicing, maintenance and repair of the implemented intralogistics solutions.

INTERNATIONAL OUTREACH

Our advanced and high-tech solutions have been acknowledged all over the world. We are offering intralogistics solutions in the countries of Europe, Africa, Asia and Latin America.

We are a company that offers complex and innovative intralogistic solutions adapted to the individual demands of the client.

We are able to recognize the needs of investors already at the design phase. This helps us customize further solutions. From the very beginning of our business activity, we have carried out both simple and highly complex systems.



intralogistics solutions

We offer a complex execution of intralogistics solutions investments. These high-tech systems, customized to the individual requirements, provide the highest standards.

01

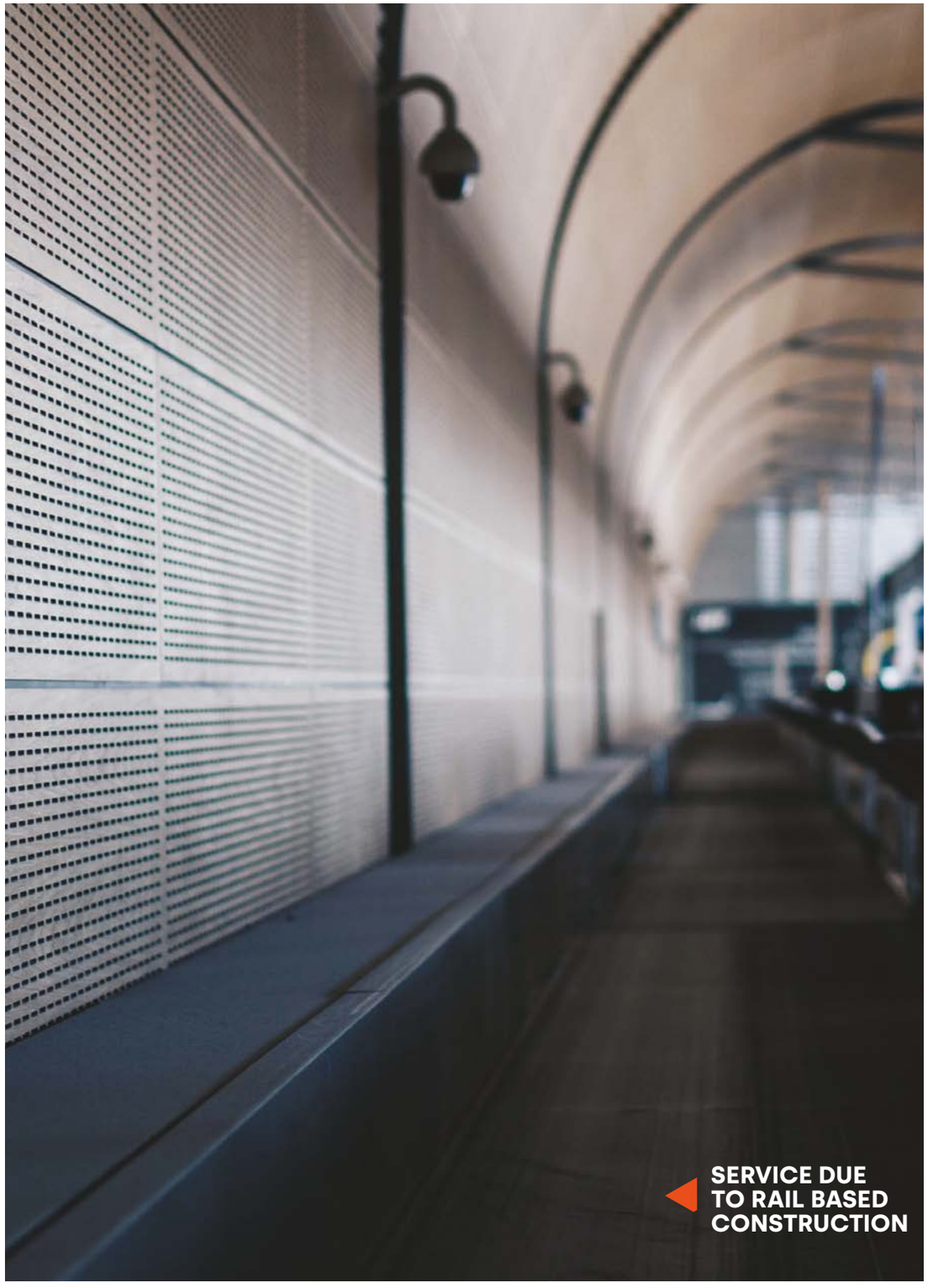
infeed conveyor

The Dimark infeed conveyor is designed for collecting and transporting materials.

The Dimark infeed conveyor is designed for collecting and transporting materials. Device is used for efficient feeding the materials on a conveyor system and in a sorting system.
It is driven by an electric gear motor, with power adapted to the length of the conveyor. The device can be configured by combining different modules, that allow getting required lengths. Each of the conveyors is manufactured with welded mainframe and other elements are connected to the body in order to assure easy maintenance. It's equipped with special short cover on both sides to provide secure performance. The table is reinforced with welded steel profiles and belt is placed on a smooth steel surface. This design provides high durability and low noise.

Features & benefits:

- integrated with the material handling system
- modular design
- high capacity
- low noise level
- low energy consumption
- easy adjustment and replacement of belts
- the device can be adapted to the customer needs, e.g.:
  - adjustable conveyor height
  - sensors control position of the material
  - sidewalls to prevent materials from falling off the conveyor
  - possible stainless steel cover which provides extended life of the device.



02

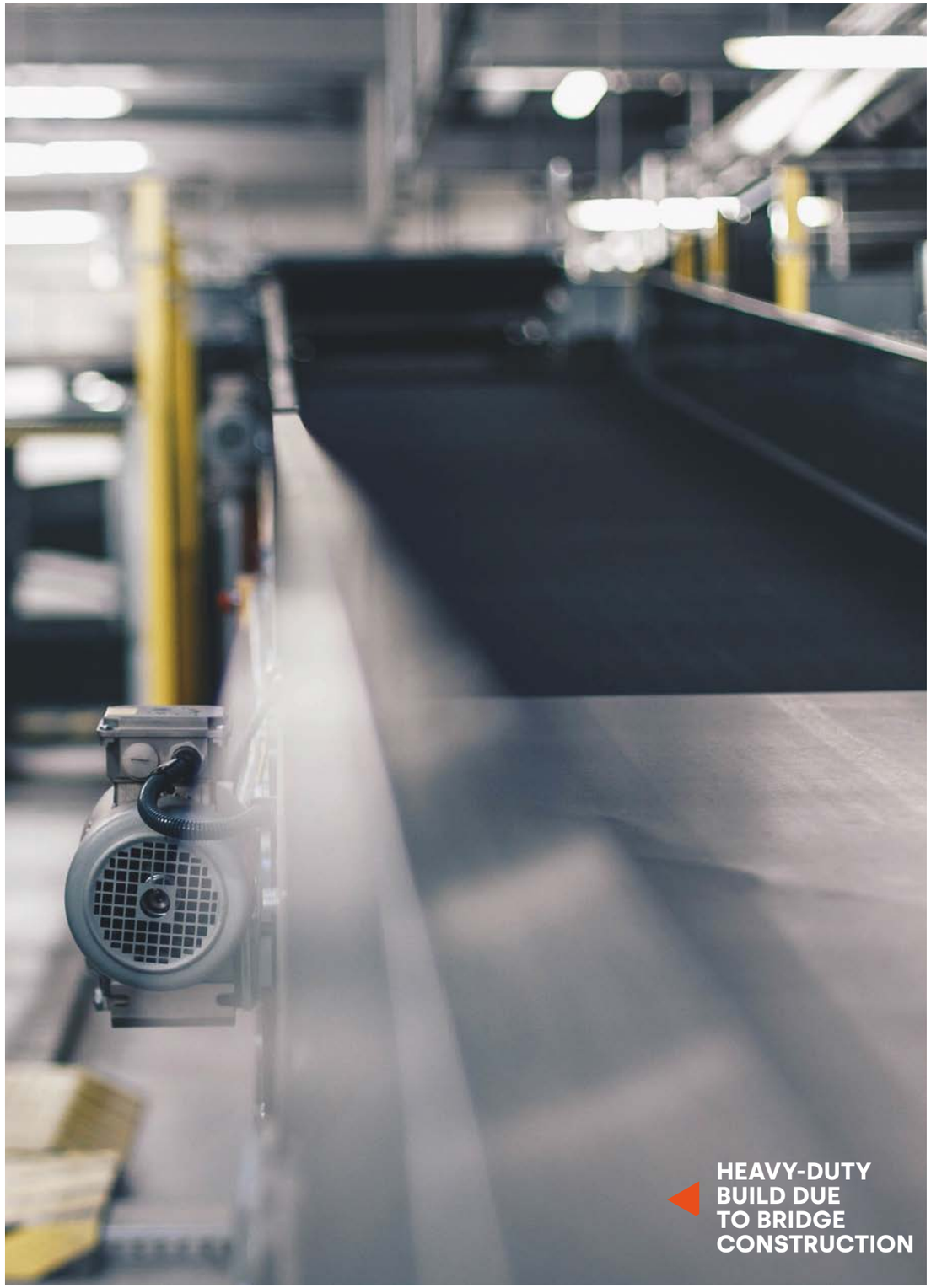
belt conveyor

Elementary part of effective transport and sorting system with movement provided by belts.

Dimark conveyors belt are manufactured with heavy-duty bridge construction, ensuring high durability and low noise level. All conveyors have a channel shaped body. Designed for ease of maintenance as any key component can be removed and reassembled in less than 30 minutes. All conveyors are equipped with a system protecting the material against damage during transport. Belts are antistatic, low noise with an impregnated work surface for friction reduction. They are carefully selected to assure proper adhesion, preventing materials from rolling up or sliding. Conveyors belt are integrated with material handling system.

Features & benefits:

- durable construction
- low noise level
- low energy consumption
- high load capacity
- easy maintenance



HEAVY-DUTY BUILD DUE TO BRIDGE CONSTRUCTION

03

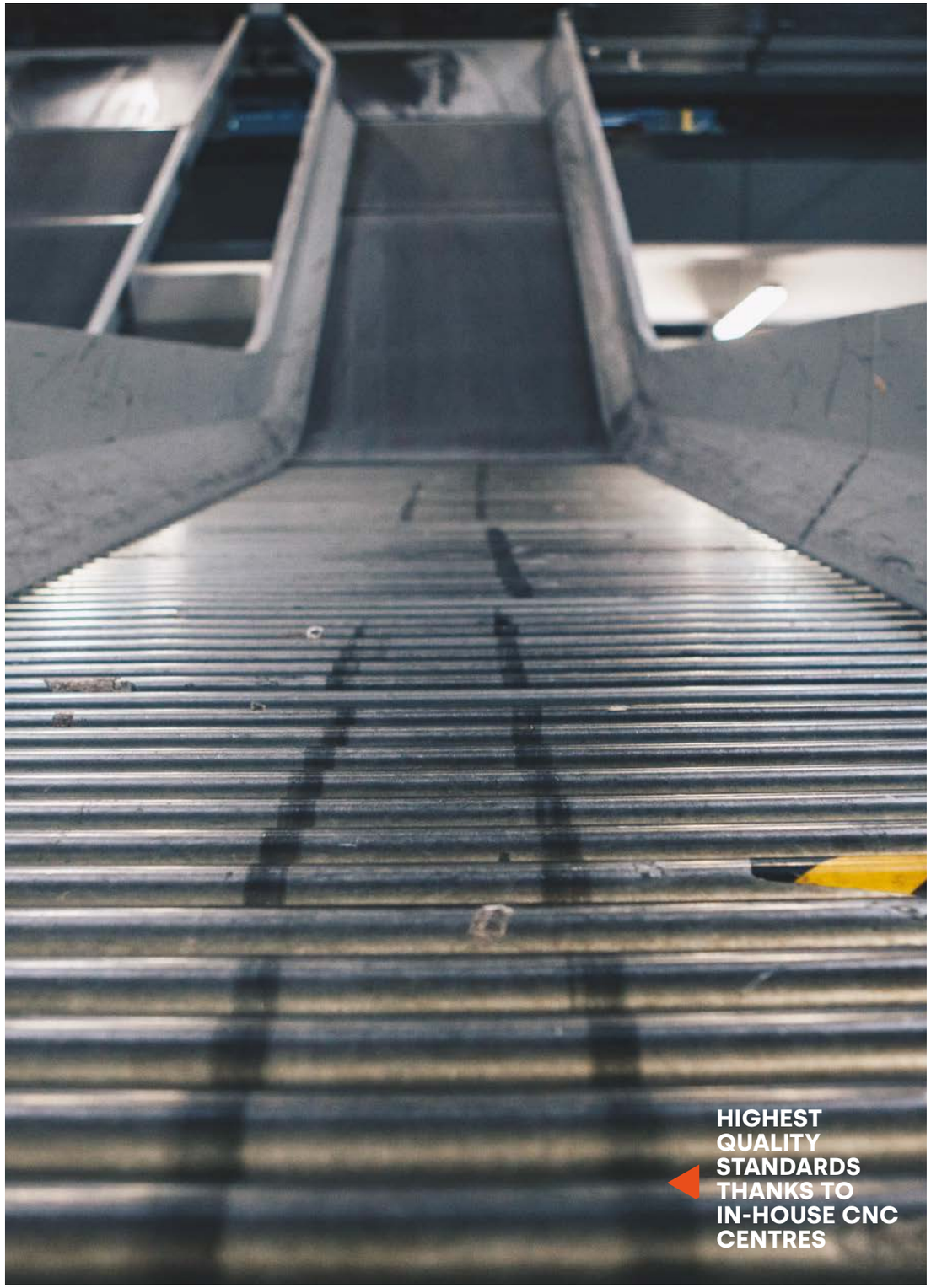
roller conveyor

Elementary part of effective transport and sorting system with movement provided by rollers.

Dimark roller conveyor is a device designed for transporting materials. Each of the conveyor has a welded mainframe with remaining elements connected to it. The rollers are adapted for specific materials and are mounted to the mainframe. The design provides high rigidity and durability. The device is integrated with material handling system and can be adapted to the customer needs.

Features & benefits:

- adjustable conveyor height
- easy replacement of the rollers
- modular construction
- low noise level
- low level of failure because of few spare parts



04

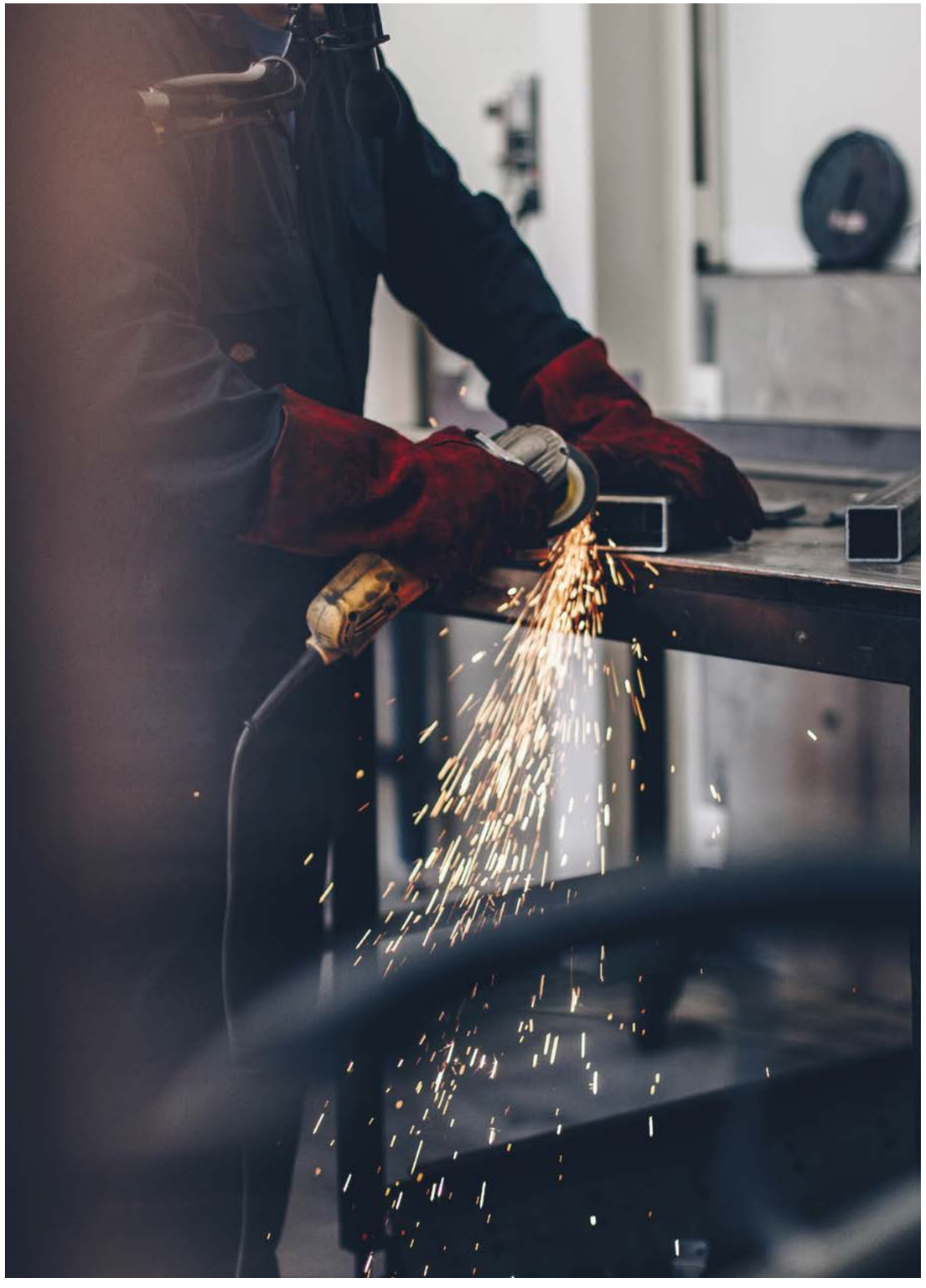
horizontal distribution conveyor

The Dimark horizontal conveyor can be provided as a standard product or designed according to the requirements of the client.

Dimark horizontal distribution conveyor is a device designed for easy and fast sorting of materials into 2 or 3 preferred directions. The device is fully customized and can be adjusted to specific requirements. The design provides high performance and durability with guaranteed low noise operation and efficient energy consumption. Horizontal distribution conveyor is integrated with material handling system.

Features & benefits:

- the device can be adapted to the customer needs
- high performance line distribution
- precise and highly configurable
- modular design
- high capacity
- low noise level
- low energy consumption
- durable construction



05

curve conveyor

Device that enable material transport on bends angle connections of up to 180 degrees.

Dimark curve conveyors are used where the line changes direction to ensure smooth and efficient material movement. This solution provides material tracking with very high efficiency of the system. “Wing” construction allows the device to be supported by the legs only on one side, which enables quick and easy service. Applied technological solutions enable years of operation without the necessity of replacing the belt. Curve conveyor is integrated with material handling system.

Features & benefits:

- durable construction
- quick service and repair
- low noise level
- high load capacity
- wing structure
- quick installation of the belt
- bearing sets guarantee excellent lifecycle performance of the belt

06

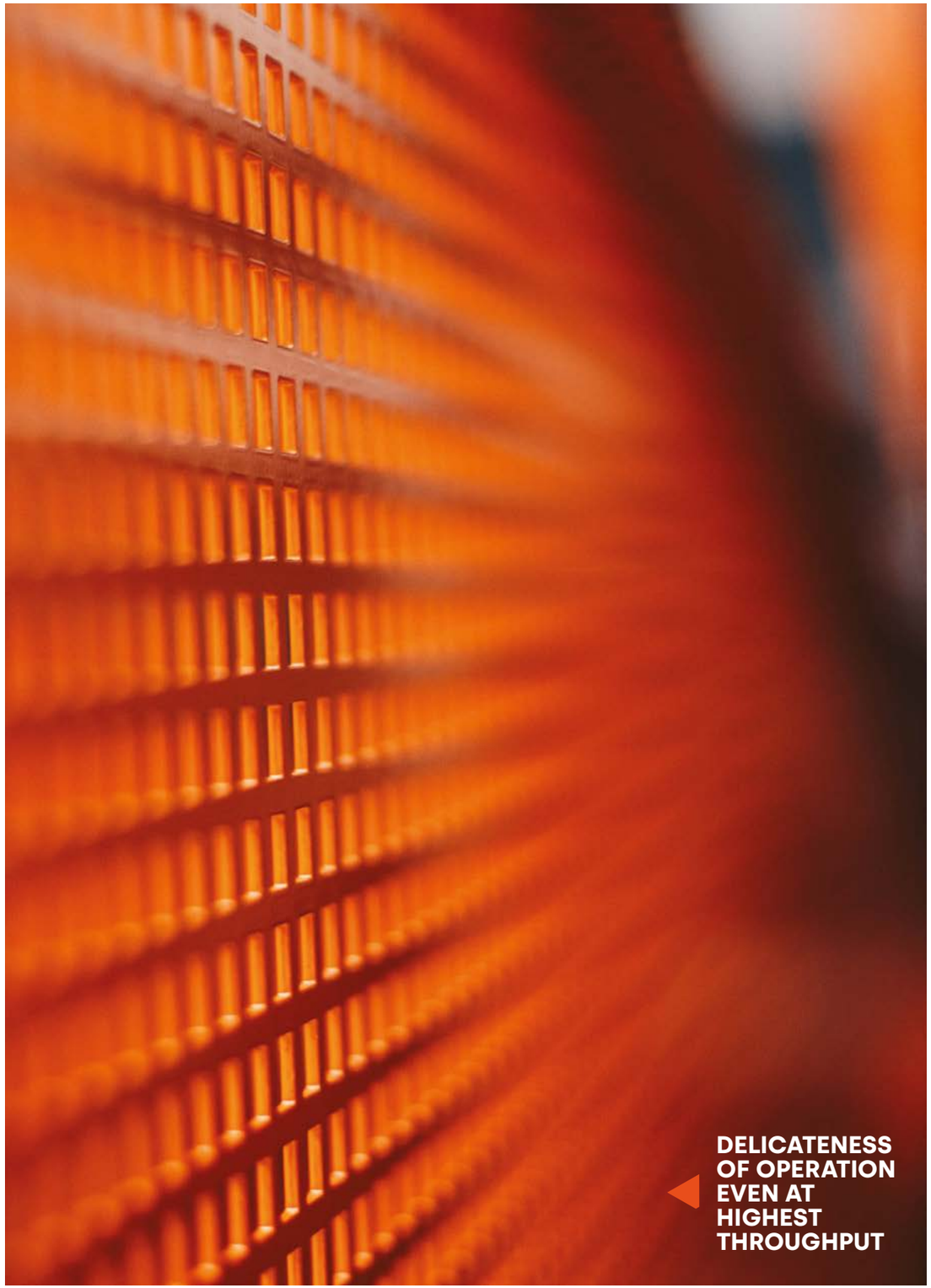
merge conveyor

The Dimark merge conveyor provides smooth connection of two streams of materials.

It is driven by an electric gear-motor to assure accurate speed. Device is equipped with sensors in order to track the materials and avoid collisions. Each of the conveyors has a welded mainframe, and other elements connected to the body. The merge conveyor is equipped with sidewalls to prevent materials from falling off the line. Merge conveyor is integrated with material handling system.

Features & benefits:

- smooth transport of material
- adjustable conveyor height
- easily removable motor drive and rollers
- the design of the conveyor allows easy adjustment and replacement of belts
- wide range of speeds
- high capacity
- low noise level



ALL PARTS OF DIMARK'S DEVICES ARE MADE IN HOUSE

07

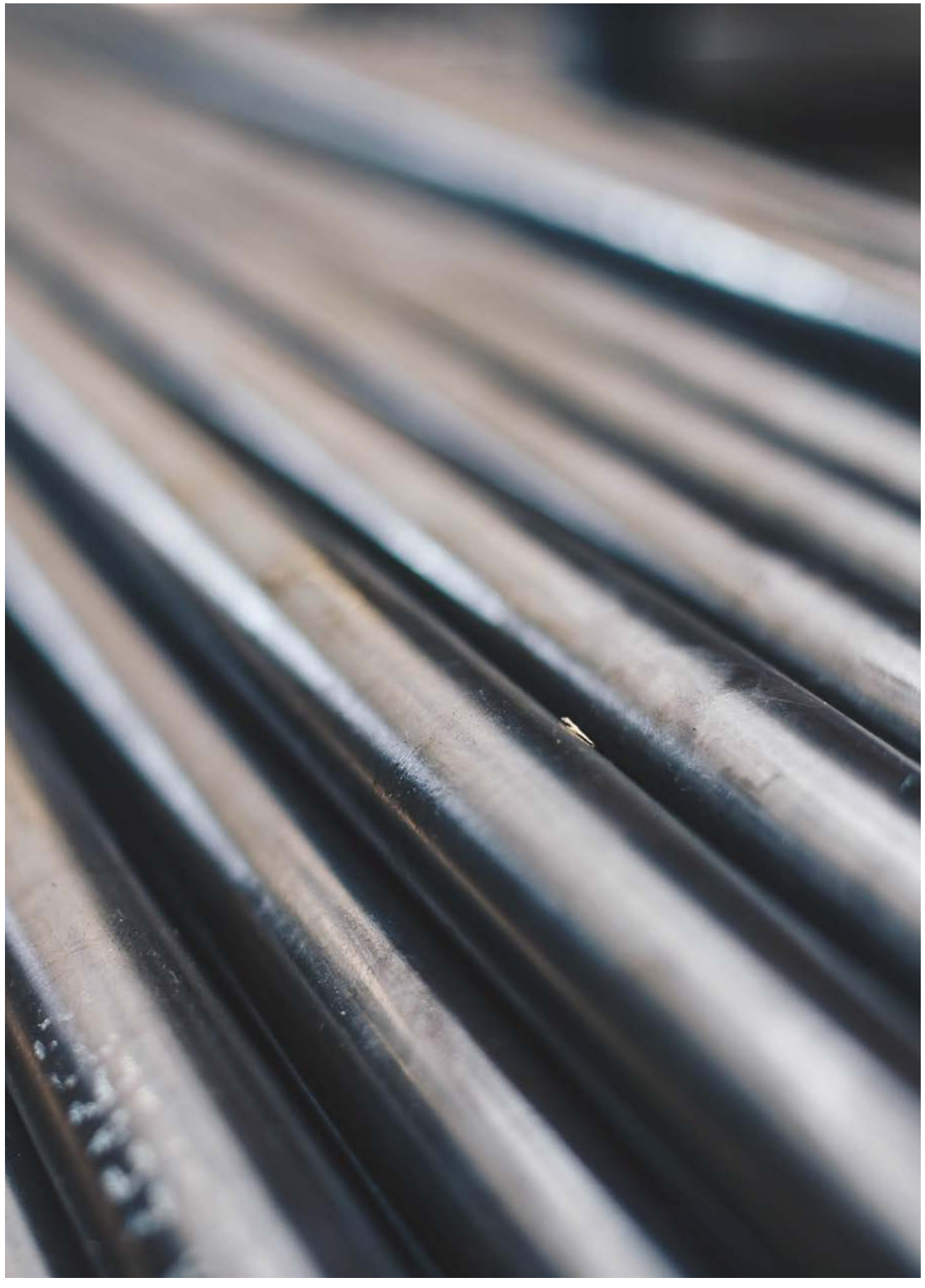
induction conveyor

Dimark induction conveyor is a device designed for smooth and efficient material input to the sorting system.

Each of the conveyors has a welded mainframe, and other elements are connected to the body. The induction conveyor is equipped with small sidewalls to prevent from falling off the line. Sensors, mounted at the end of the induction conveyor, check the position and precisely dispatch materials to the sorting device. Induction conveyor is integrated with material handling system.

Features & benefits:

- smooth material transport to the sorting device
- equipped with sensors controlling the position of materials
- adjustable conveyor height
- easily removable drive
- high capacity
- conveyor, check the position and precisely dispatch materials to the sorting device. Induction conveyor is integrated with material handling system.
- easy adjustment and replacement of belts
- wide range of speed
- low noise level



8.1

tilt-tray sorter

Dimark tilt tray sorter can be designed according to the requirements of the client.

The tilt tray sorter is designed for accurate transporting and effective sorting. This fast closed loop device accurately and precisely sorts materials of various dimensions. The tilt tray sorter consists of three main components:

- track (bend and straight units)
- carts
- supporting structure

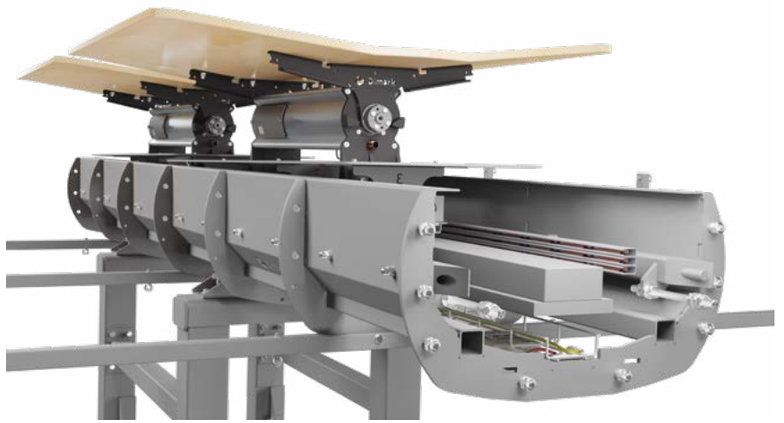
The drives are mounted on the straight units of the track, the drive's amount depends on sorter's length and efficiency. All sorter carts are assembled in a one loop pattern and lay on the sorter track. The sorter can be equipped with two kinds of drives:

- electromagnetic
- friction

Materials are placed on the cart trays by the system of transporters called "Induction" - merged belt conveyor, at the end of this system precisely places transported objects. Materials are dropped by tilting trays to the chutes at the collection point.

Features & benefits:

- automatic levelling of carts
- smooth and precise materials dispatching on the sorter carts
- possibility to mount safety sidewalls on the whole length of the sorting device
- modular design
- adjustable chain length
- high durability of the construction
- flexible adaptation of the support structure
- service area, allows for easy maintenance
- closed circuit, carts are powered from each position of the sorter
- anti-vibration mountings for sorter supports



8.2

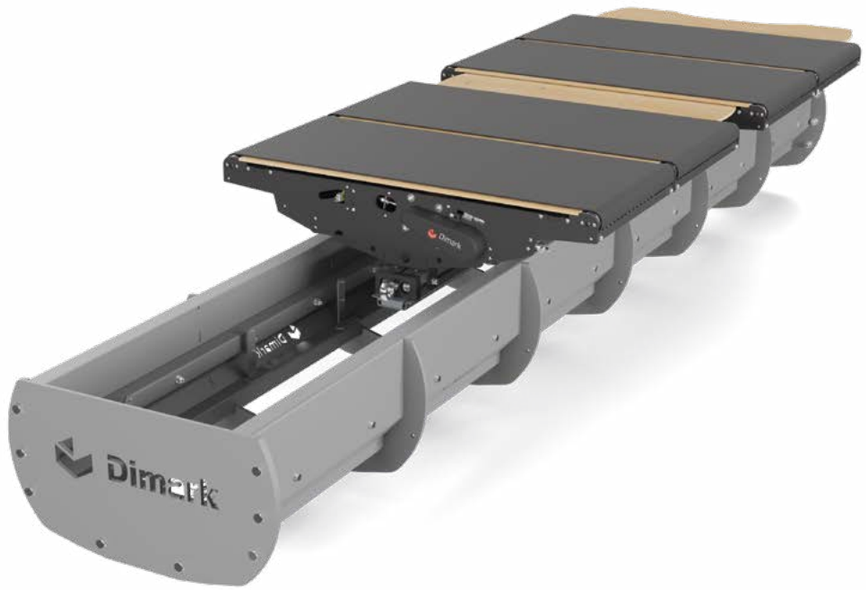
cross-belt sorter

Dimark cross-belt sorter can be designed according to the requirements of the client.

Cross belt sorter is an automated device for effective material sorting. Its safe design allows sorting a wide range of materials (delicate, fragile, etc.) of various shapes. Materials are transferred from the transport system to the sorter by the induction unit, which guarantees safe, appropriate and most optimal way to transfer the product to the sorter. Modular sorter design with flexible layout options assures optimal solution selection for specific application.

Features & benefits:

- high sortation rate
- modular and optimized design
- smooth materials sorting
- possibility of sorting various shapes and sizes of the materials with high efficiency and low noise
- materials self-positioning function
- low maintenance
- energy-saving drive system



09

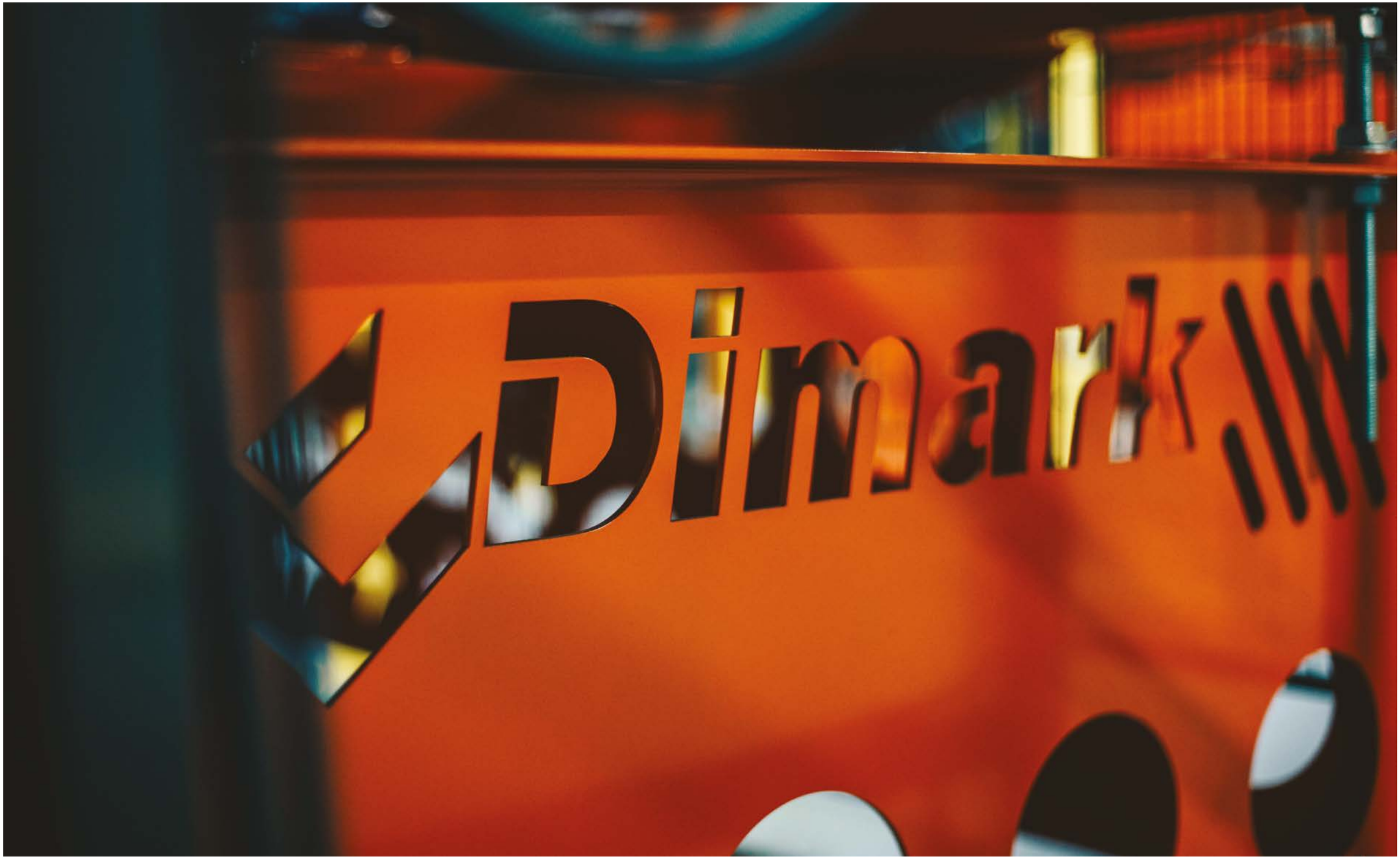
chutes

Dimark chutes can be provided according to the requirements of the client.

The chutes are the last point of the material handling system. The chutes are equipped with tracking sensor and filling sensor. Each chute is designed accordingly to the local site conditions. Slide modules, legs and sidewalls are connected to the mainframe. Sidewalls are made of plywood or metal.

Features & benefits:

- adjustable chute height, angle and size
- equipped with sidewalls to prevent from falling off the chute
- modular design
- high capacity
- high-friction mat compatible


Dimark

10

automation

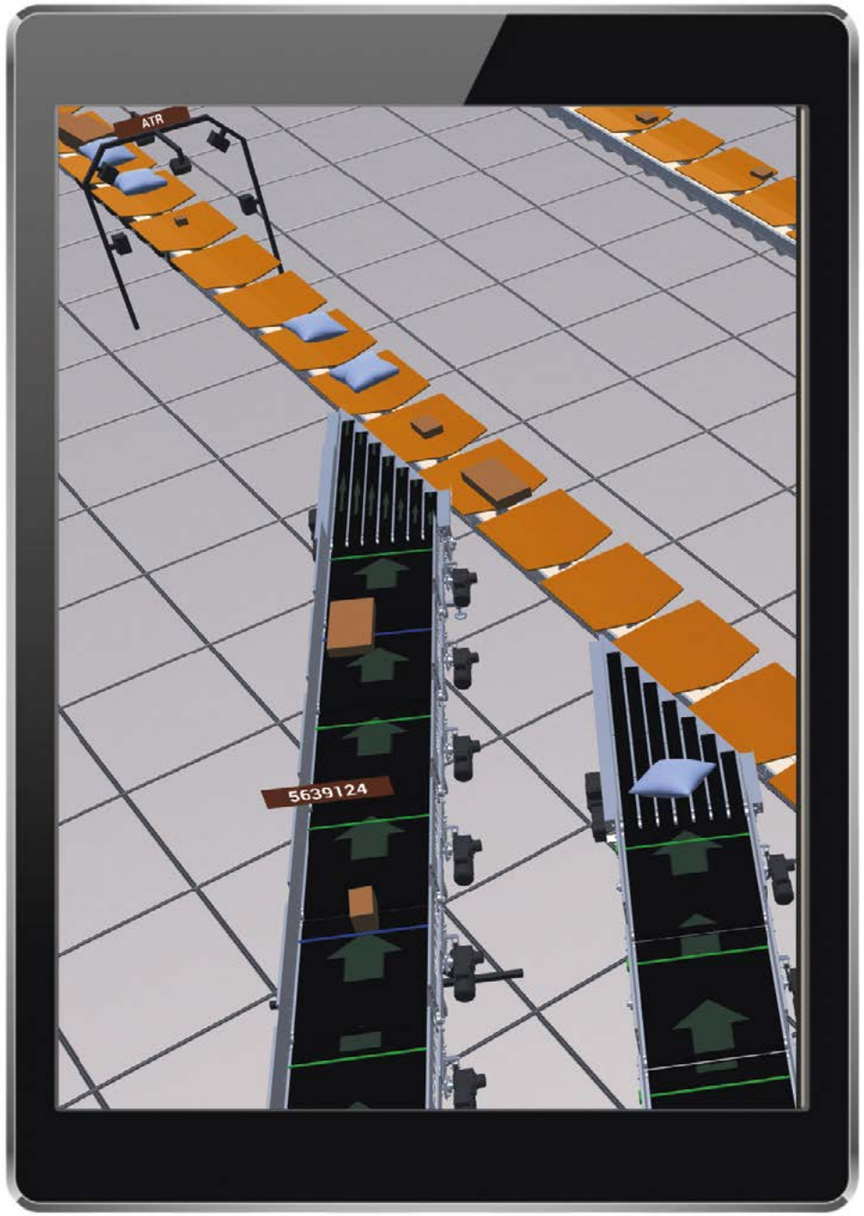
SCADA

An absolutely revolutionary tool which thanks to advanced techniques makes it possible to take the operator's work to a whole new level.

The platform enables clear, precise and fast presentation of all information about the BHS system and parcel. Integration with PLC, SAC, BRS, CCTV and SCADA provides access to all necessary information about every element of the facility, including flights data. The possibility of using multi-monitor workstations combined in the walls of monitors thanks to realistic 3D visualization significantly affects the perception of the entire installation.

Features & benefits:

- simulation of physical parameters of parcel and transporters
- current and historical analysis of the parcel
- stream flow
- interactive and intuitive user interface
- prediction of system behavior
- easy access to project and service documentation
- virtual and augmented reality
- service planning
- realistic reflection of reality
- improving the system perception in operational planning
- reduction of service and maintenance time to a minimum
- optimization of operational, investment and business activities



1 Visualization

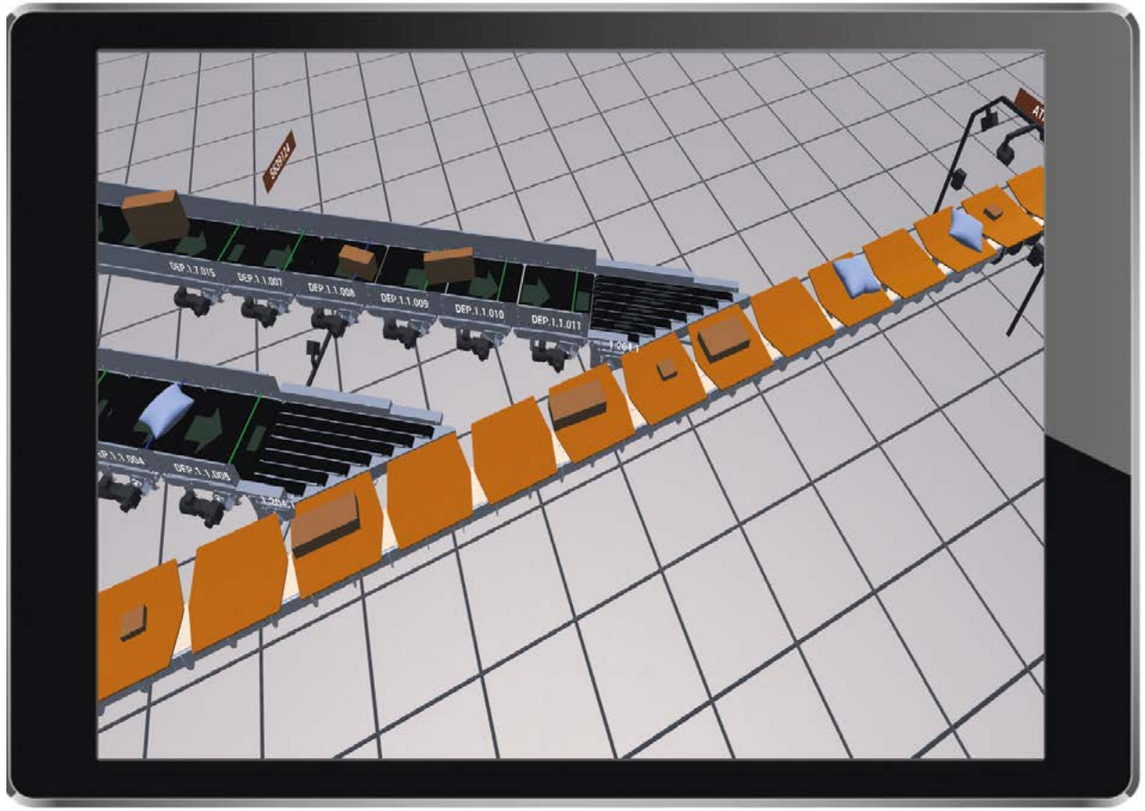
Excellent model mapping allows for precise diagnostics using augmented reality technology. The software also allows working on tablets for quick access to data on BHS components. Remote access provides support for competence centers. The software, using full tracking and control of the system, presents the current flow of parcels along with the status of the entire BHS system. Thanks to data backup and user-friendly interface, it is possible to quickly analyze historical events. Recording alarms, warnings and events together with integration of CCTV allows for quick and precise actions based on in-depth diagnostics and system perception.

2 Simulations and Predictions

An innovative solution developed by Dimark IT, taking into account physical properties, such as shape, weight, center of gravity, friction, etc., allows for an accurate representation of reality. Thanks to this it is possible to simulate and predict the behavior of the entire installation in extreme situations, find the bottleneck of the system and choose the most efficient way to use the facility or propose modifications.

3 Management

User-friendly, advanced diagnostic and control tools allow for quick access to all necessary information from a single location. Interactive visualization and integration with design and maintenance documentation allows for planning and verification of the service. Information support about the history of system operation, extensive diagnostics along with reports and statistics allow for precise planning of BHS service. Quick and easy access to project and service documentation and the ability to easily operate the system, reduces to a minimum the time needed to restore the system to work in case of any failure or maintenance work.



Sortation Control System

The Dimark sortation control system SCS is a computer system supporting the management of the parcel flow, control and sorting processes.

This solution is an integral part of the PHS (Parcel Handling System) and consists of the series of modules responsible for particular areas of the parcel managing processes. All modules are integrated and share a common database. Once entered into the system, Information will be available wherever it may be needed. At the same time, the modular structure of the system guarantees adaptation to the current needs and rights of defined user groups. Intuitive WEB and Thin Client application allow easy and fast access to managing data.

It includes the following functions:

- parcel flow Information
  - viewing all parcel Information
  - tracking information
  - time of milestone registration in system
- sorting table
  - easy & Intuitive Drag & Drop Interface
  - automatic Sorting Table Updates
  - custom schedule editing
- sort planning
  - autoplanner
  - default allocation rules
  - gantt & table allocation visualization
- multi- user & workstation architecture
- analysis and reporting of system operations
  - graphic charts and text reports, export function
- interfacing with third party systems
  - XML, FTP, JSON, REST, XLS, CSV and many others possibilities to exchange data

Automation Control System

The Dimark automation control system ACS is a group of automation subsystems that manages and controls the entire process of controlling the transport process and identification system.

ACS consists (LLC) Low Level Control, Identification, Measuring and Communication subsystems.
These systems are based on modern components from reputable companies such as SIEMENS, EATON, Peperl & Fush, DATALOGIC, SICK, RITTAL, PhoenixContact, DELL, etc. Many years of close cooperation with these companies and our own research and development department have resulted in many excellent solutions ensuring fast, failure-free, precise and resistant to difficult working conditions. The implemented Industry 4.0 solutions put great emphasis on verifying the correctness of work, remote monitoring, shortening the time of service and possible repairs; anticipating the need to implement preventive actions to prevent failures and extensive analysis of the operation of the entire system.

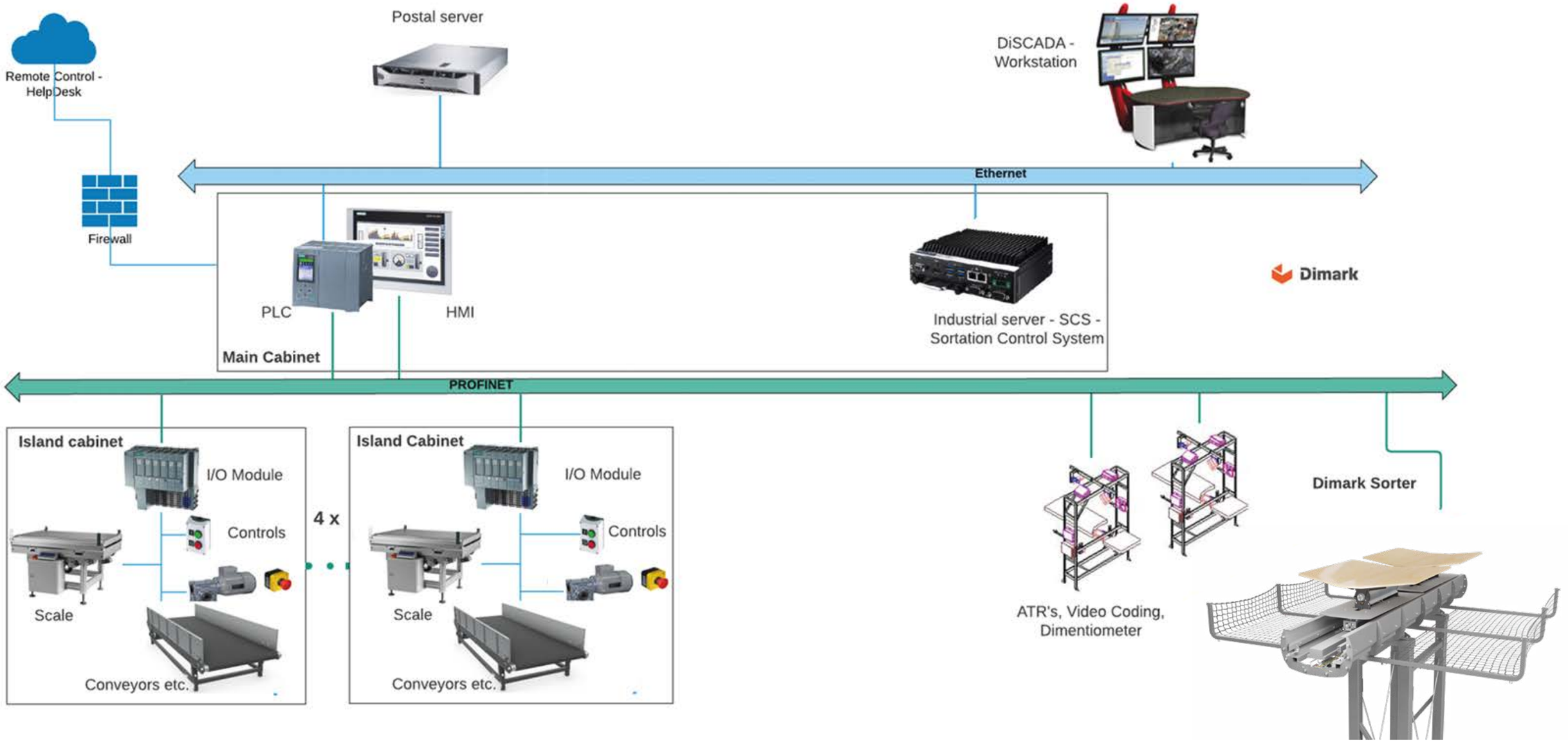
Features & benefits:

DECENTRALISED SYSTEM ARCHITECTURE
- enables service work limited to a single drive without shutting down the entire system
- providing a local and manual control system at the site of each drive
- simplifies diagnostics
- reduces installation and service time and cost
- significantly reduces the impact of the work on the operation of the entire system

REDUNDANCY
- possibility of using redundant PLC controllers
- automated immediate switching operation between controllers allows for uninterrupted operation of the entire system even in the event of a PLC failure
- communication connections in the ring provide resistance to single faults or exclusions of a fragment of the network

IDENTIFICATION & MEASURING
- timeline visualization
- speed measurements of each transporter
- precise multi-head barcode readings with great efficiency and effectiveness
- video coding systems
- precise flow measurements of weight, dimensions and volume

SERVICE & MAINTENANCE
- HMI (human – Machine Interface) allow easy access and diagnostic on each mains cabinets
- extensive diagnostics allows for a thorough analysis of the system operation
- a mobile support system for service work with access to full documentation, operating instructions and spare parts inventory drastically reduces service time and allows you to avoid many errors caused by improper operation
- standardization of solutions in the entire system allows for easy maintenance of service efficiency


Remote Control -
HelpDesk
Firewall
Postal server
DiSCADA -
Workstation
Ethernet
PLC
HMI
Main Cabinet
Industrial server - SCS -
Sortation Control System
Dimark
PROFINET
Island cabinet
I/O Module
Controls
Scale
Conveyors etc.
4 x
Island Cabinet
I/O Module
Controls
Scale
Conveyors etc.
ATR's, Video Coding,
Dimentiometer
Dimark Sorter

Why Dimark?

Experience
We commenced our business activity in 1994. Over the years we gained the experience that now is a warranty of the highest quality service employing optimal technology customized to the needs of every Client.

Solutions of International Standard
Presently, we offer our Clients high-tech, state-of-the-art solutions that meet top international requirements of the industry.

Trusted Suppliers and High Quality
We rely on dependable and well operating supply chains, thanks to which we guarantee the highest quality of offered products. Selecting appropriate materials means maximal durability, as well as reliable and easy maintenance of our appliances at operation.

New Technologies
Our company owns a comprehensive research and development department (R&D) where regular tests and monitoring are carried out. As a result, we do not only continually upgrade and improve our systems, but also introduce the market with new, more advanced products.

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