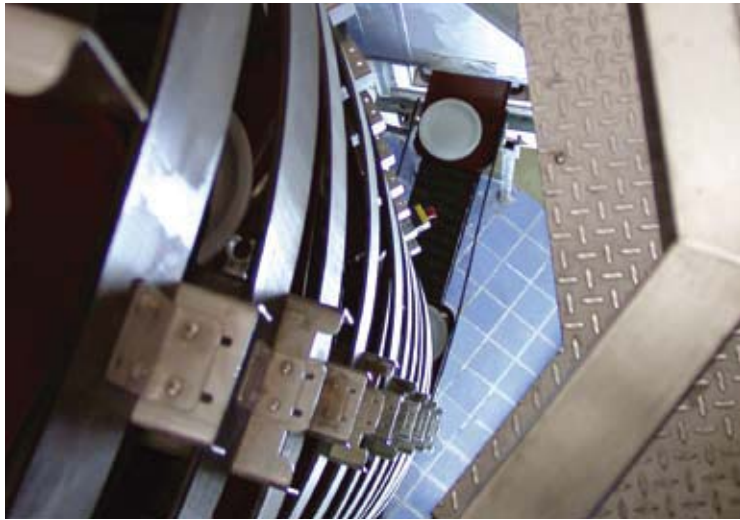


rendisk

dishwashing logistics





How will you improve your
dishwashing process?

Specialists in dishwashing sorting systems

Over 30 years, Rendisk is well known within the market for professional food service equipment. With its large range of dishwashing logistic systems, it is nowadays an established brand.

From our factory in Ruurlo, the Netherlands, all Rendisk dishwashing logistic systems are developed, engineered and produced. The Rendisk sorting systems are used in hospitals, restaurants, universities and company-restaurants all over Europe.

Washing-up is a form of process technique requiring a professional approach. It is not only a matter of purchasing a dishwasher. Various factors are involved:

- Number of items to be washed
- Dimensions of items to be washed
- Available time
- Number of employees
- Dimensions of dishwashing room
- Internal transport
- Hygiene
- Ergonomics

Investment

The investment in equipment usually means balancing the amount to be invested against the annually recurring costs concerning labour, water, energy, detergent and drying-agent. This leaflet is about a productrange, which can be designed to suit every specific situation. Reliability, hygiene and optimization of ergonomic aspects result in a reduction of the operating cost of large-scale catering facilities. Rendisk puts warewashing logistics in large scale catering on a higher level.

Index

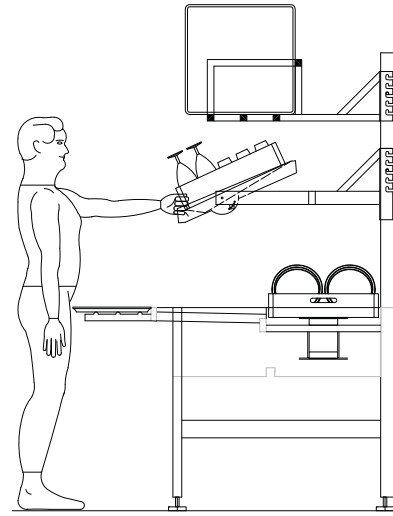
• Sorting units	P 4
- in-front system	
- High-low system	
• Conveyor systems	P 10
• Dishwashing logistics	P 12/13
• Processing of waste	P 14
• Special design	P 16
- Elevators	
- Cutlery magnets	
- Iso-tray solutions	
• References	P 20



Sorting units

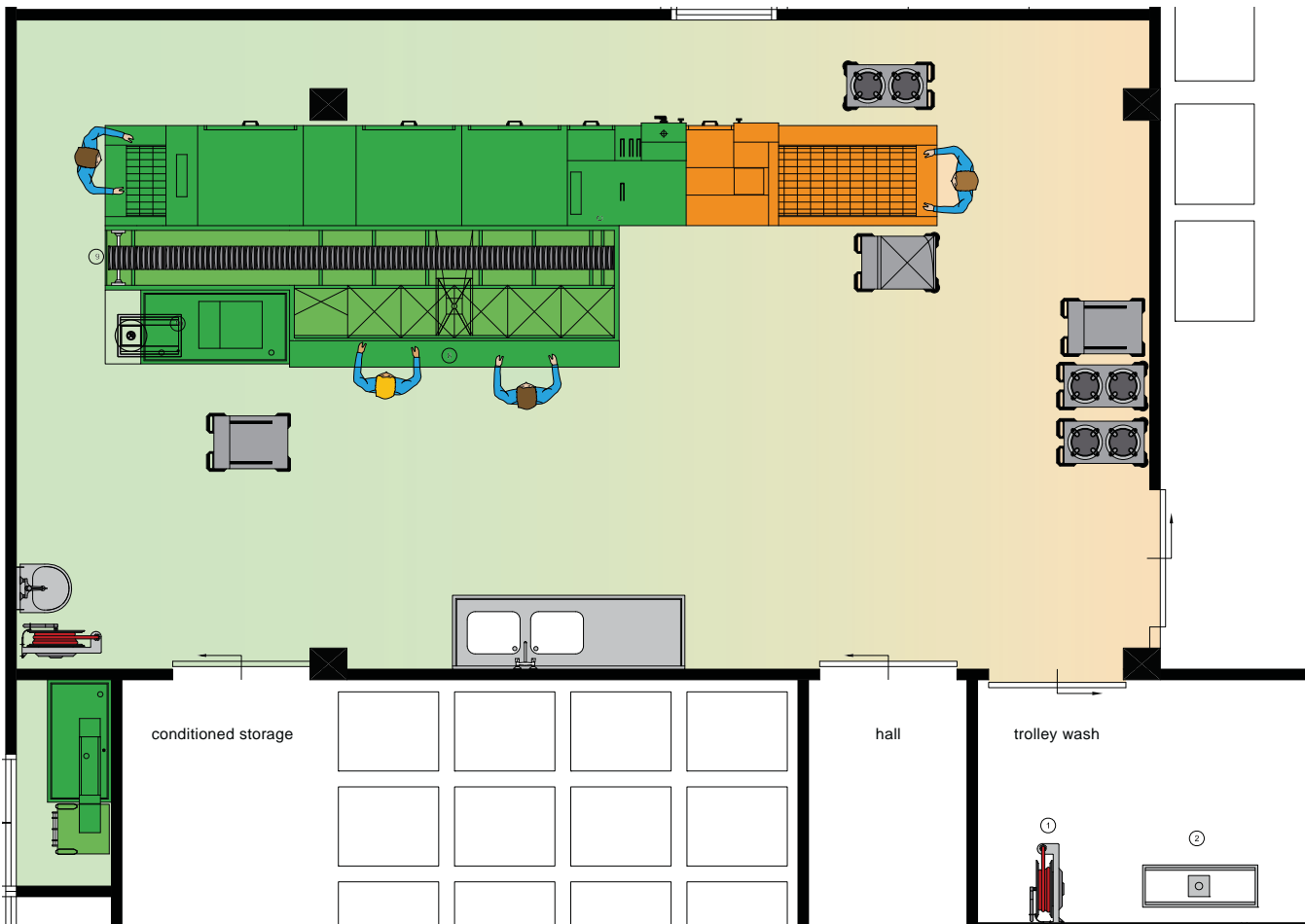
In-front system

The Rendisk sorting unit, in-front system, with trayslide sorting unit and a basket conveyor is an easy way of quick sorting. The trayslide can be used either for sliding trays or for setting down dishes directly. The dishes can easily be sorted into the baskets which are placed on the Rendisk sorting-unit cleansort. When a basket is filled, it can, depending on the system, be pushed or pulled to the basketconveyor, type Cleanflex. The Rendisk conveyor transports the baskets to the dishwashing machine.



Features

- Minimum surface
- Systematic
- More capacity
- Reduced labour costs
- Simple to clean
- Simple to operate





Sorting units

High-low system

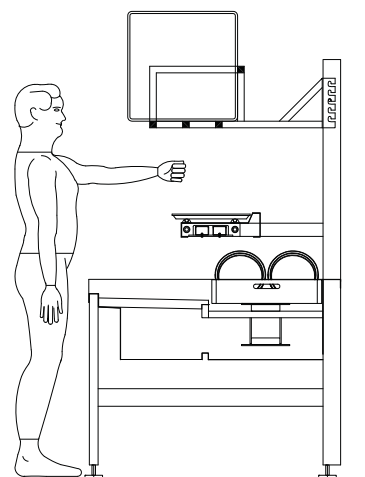
The Rendisk sorting unit with high-low system and a basket conveyor is the most ergonomic solution for the dishwashing area. The trays filled with dishes are delivered to the dishwashing area by the tray conveyor. The Rendisk tray conveyor is positioned above the sorting unit cleansort. Staff takes the dishes from the trays and places them in the baskets positioned below. Personnel can stand up straight while sorting the dishes. When a basket is filled, it is pushed forward with an empty basket taken from the storage shelf above and transferred to the basket conveyor, type Cleanflex. The conveyor transports the baskets to the dishwashing machine. Rendisk eliminates the lifting, turning and bending requirement associated with standard systems. By utilising gravity less physical effort is required by staff significantly reducing the risk of RSI (Repetitive Strain Injury).

Features

- Ergonomic
- Systematic
- More capacity
- Flexible
- Hygienic
- Simple to operate
- High capacity

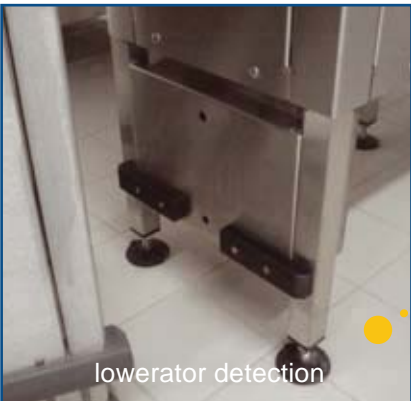
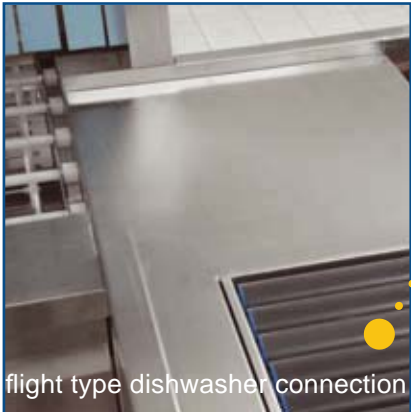
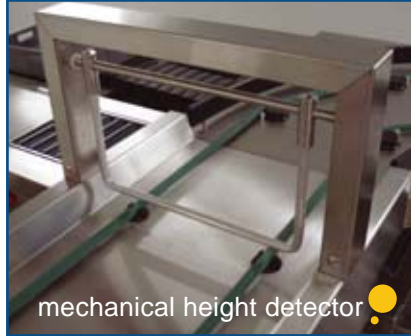
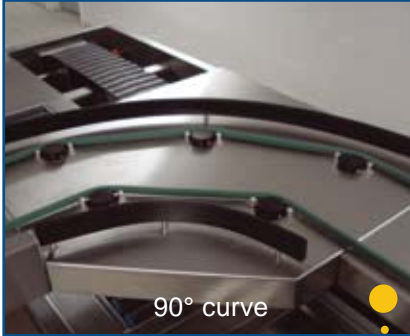
Sorting unit

The addition of a sorting unit cleansort for placing baskets 500x500mm, completes the ergonomic solution for your dishwashing area. The Rendisk sorting unit is equipped with a trough which is aligned to the removable strainer. Under the baskets are removable gratings so the trough is completely accessible for cleaning.





Sorting unit high-low system





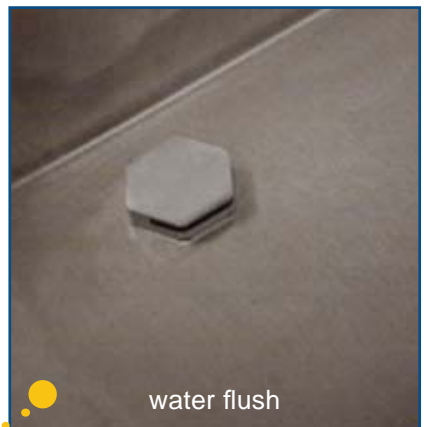
height adjustable basket shelf



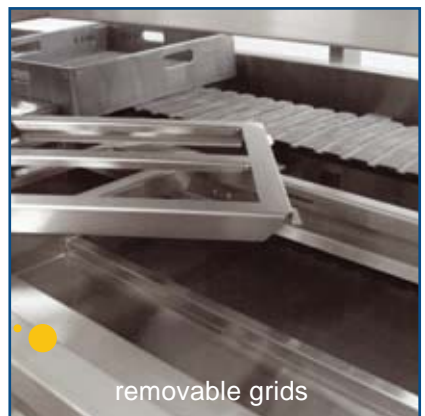
control display



flex cleaning unit



water flush



removable grids



removable 1/1 GN sieve

Conveyor systems

Clean Flex

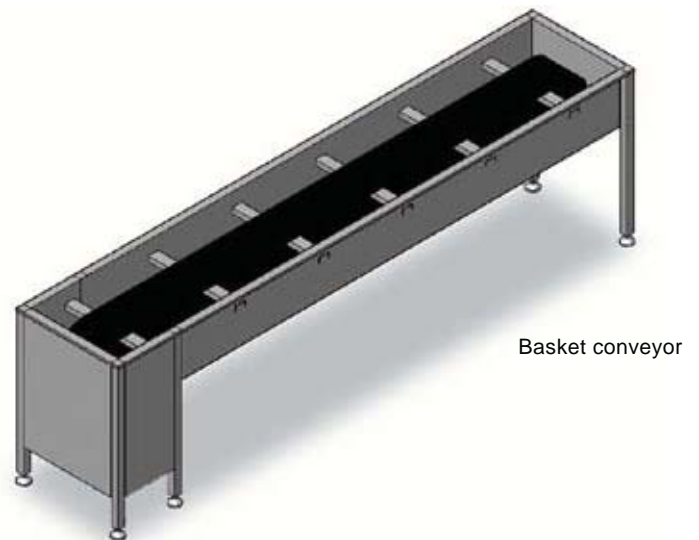
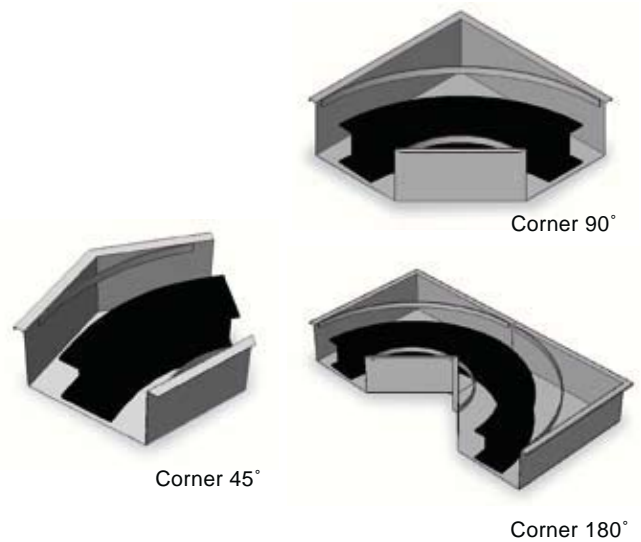
The Rendisk basket conveyor, type Cleanflex, has been designed specially to transport baskets 500x500mm over varying distances from the sorting system to the dishwashers. The belts are removable and easy to clean. The Rendisk conveyor is equipped with a stainless steel trough. The Cleanflex can be controlled by the dishwasher or a central control box used for multiple Rendisk transport items.

Technical specifications

- Frame CNS 18/10, polish 320
- Motor 0,18 kW, 230/400V
- Flexes: polyoxymethylene 220 mm
- Speed: 1,8 m/min
- On/off switch
- Emergency switch

Features

- CE-norm
- Option: control box IP 65 & PLC Controller
- Control current 24 V
- Spraying nozzle for cleaning the flexes
- Large 1/1 GN strainer
- Jam safety



Safety device



Conveyor systems

Ergo-cord

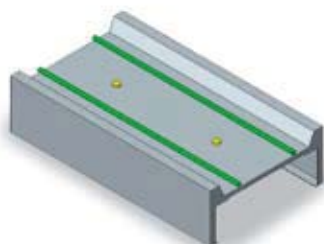
The trayconveyor, type Ergo-cord, has been designed to transport trays over varying distances. It can be easily coupled with other Rendisk horizontal and vertical transport systems. The gully is seamless with stainless steel guiding. The transportation is conducted by cord, 15mm, on which the tray can be placed. The cords are guided by cordguiders. The speed is standard 5,5 meters per minute, by changing the gears it can be varied between 3 and 9,5 m/min. The cords can be cleaned easily.

Technical specifications

- Corpus stainless steel AISI 304, 1 side polished grain 320
- Conveyer width 450 mm
- Conveyer height 195 mm
- Cords polyurethane diam.15 mm
- Frame stainless steel tube 40x40x1,5 mm
- Motorcabinet stainless steel 530x395x710 mm incl. disconnecting switch
- Powersupply 0,18 kW, 220/380V, 3f+0+A, 50 Hz
- Standard speed 5,5 m/min. (app. 11 trays per minute)
- By changing gears between 3 and 9,5 m/min (app 6 to 19 trays per minute) However adjustable by customers demand.

Features

- As an extra option a frequency regulator for every speed between 3 en 9,5 m/min
- Controlled by P.L.C. (Programmable Logical Controller)
- Including 1 on-off switch, 1 emergency switch, 1 print display
- CE-norm
- Control box IP 65
- Control current
- Automatic peak measurement



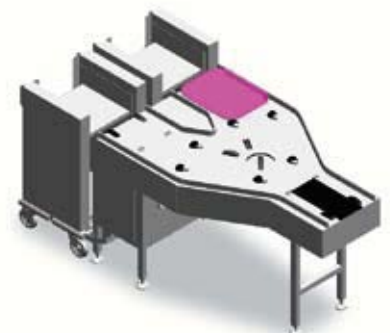
Step by step buffer system



Mechanical height detector

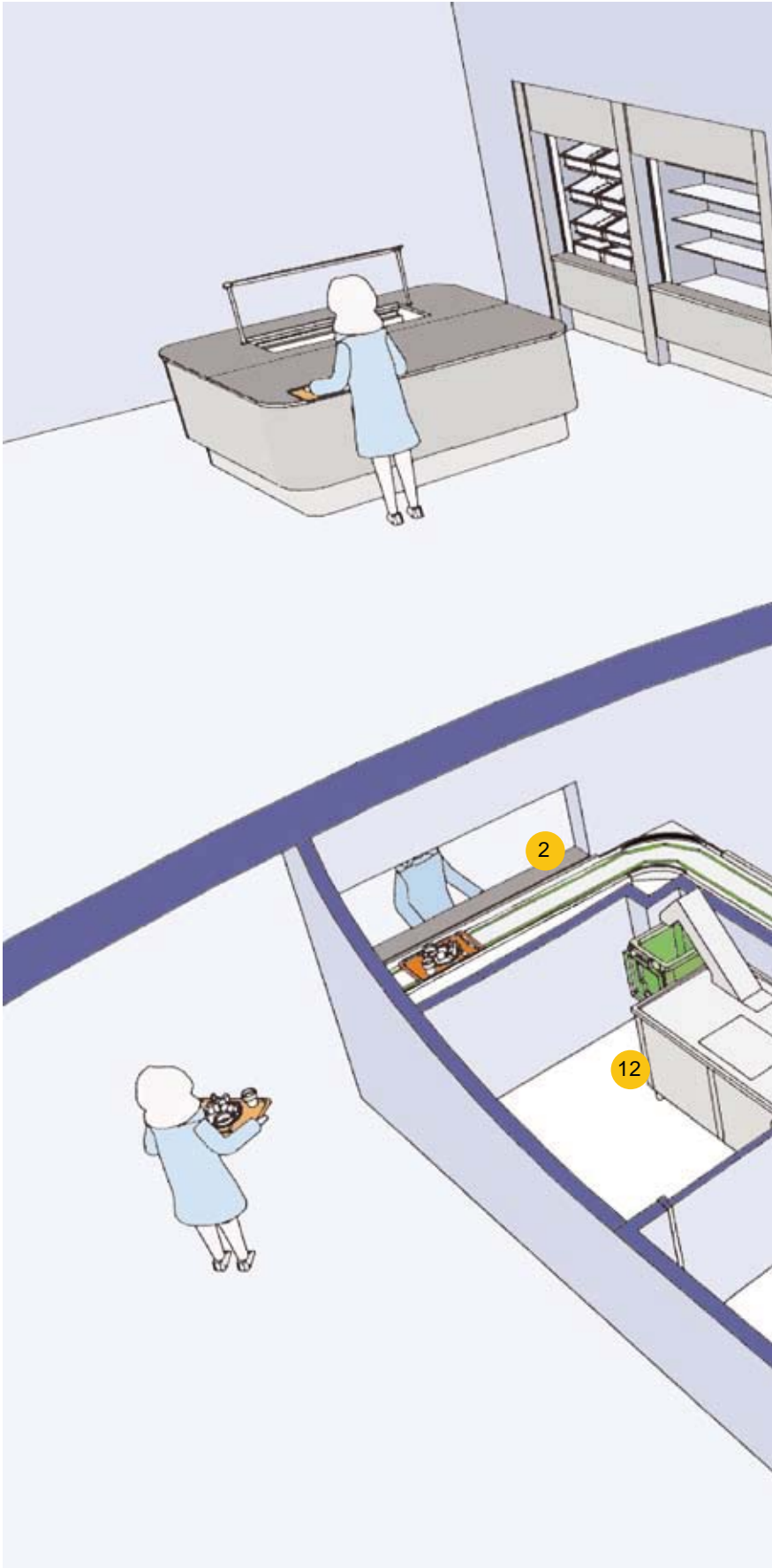
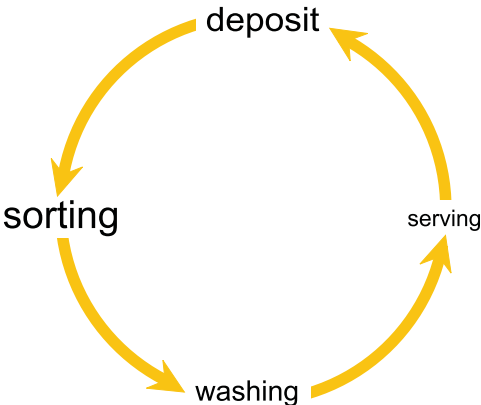


Lowerator (present and/or full) detection

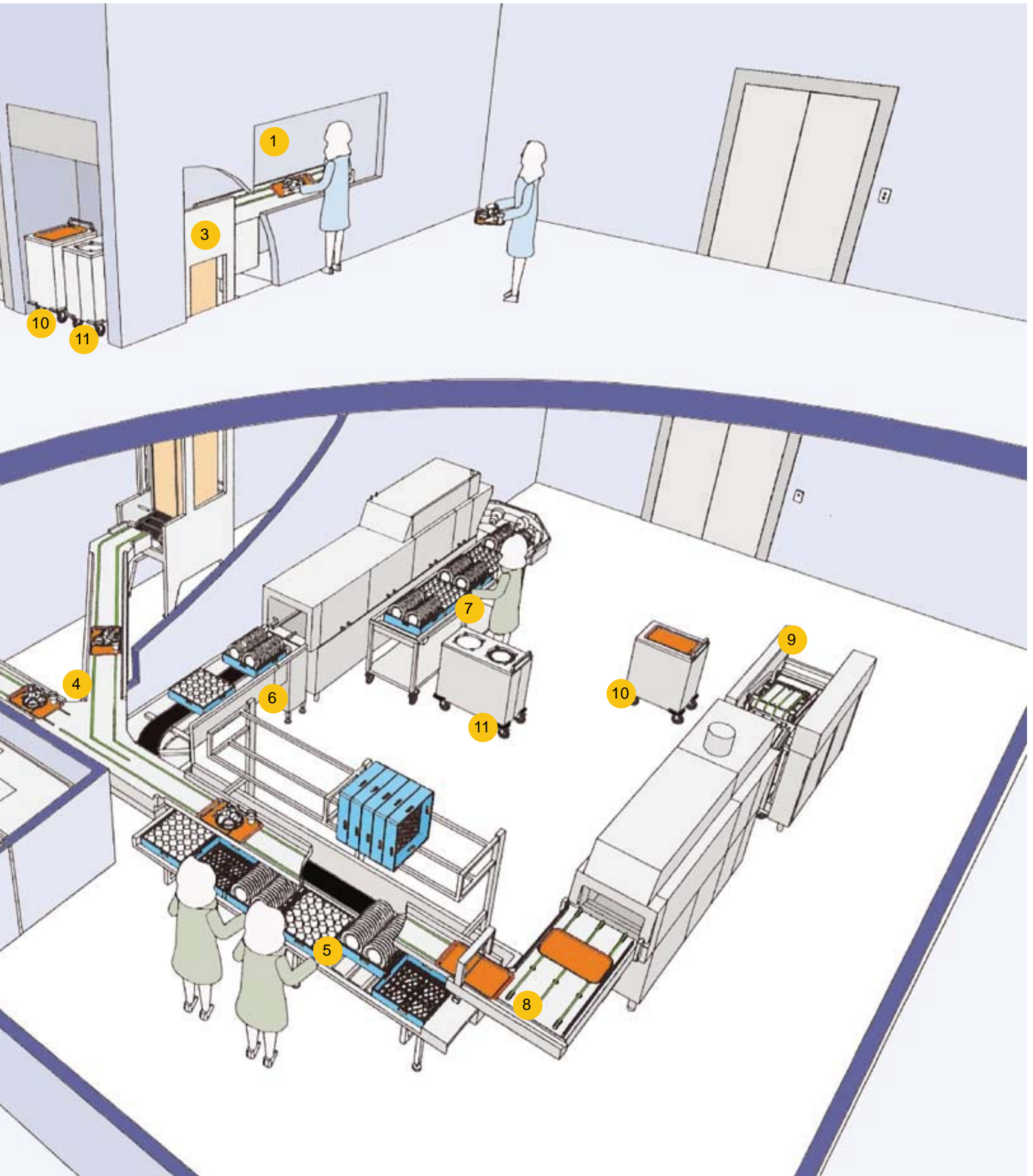


V - symmetric tray divider

Dishwashing logistics



- 1 tray deposit first floor
- 2 tray deposit ground floor
- 3 tray elevator
- 4 tray insert point
- 5 high-low sorting system
- 6 basket conveyor
- 7 roller table clean baskets
- 8 automatic 90° tray input
- 9 inline lowerator changer
- 10 tray lowerator
- 11 plate lowerator
- 12 food waste processor

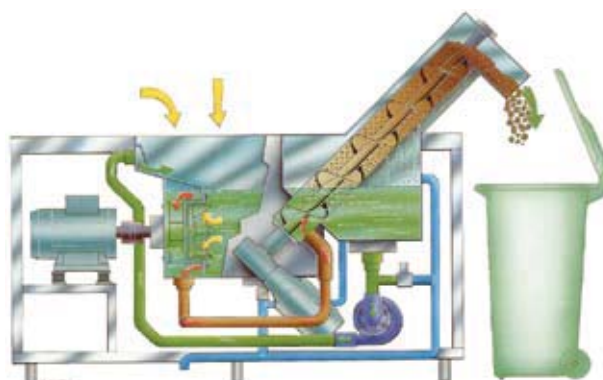


Processing of waste

The combined Rendisk Combi RC-360 reduces food-waste volume up to 70%, according to the cyclical process. Various food-waste from the sorting system is transported through pipes to the compressor. The food is mixed with recycled water. Then, separation of waste and water is realized through pressing in the separator. The water is then recycled and the almost dry waste (30%) is dropped as pulp into a container.

The system is suitable for an extensive range of waste products, including organic and inorganic material, animal/vegetable, plastic, food waste, disposables and plastic cutlery.

The separator can also be placed remotely from the main sorting operation in another area as an option.



Combined Rendisk RC-360



Grinder



Seperator

Technical specifications RC-360

- Frame s.s. 18/10, polish 320
- Tank s.s., thickness 3mm, 60ltr
- Worm screw s.s.
- 230/400V, 50Hz, 16A
- Cold water connection 19mm (3/4")
- Drain: floor drain 400 x 600mm
- Dimensions: 796 x 1616/1972mm

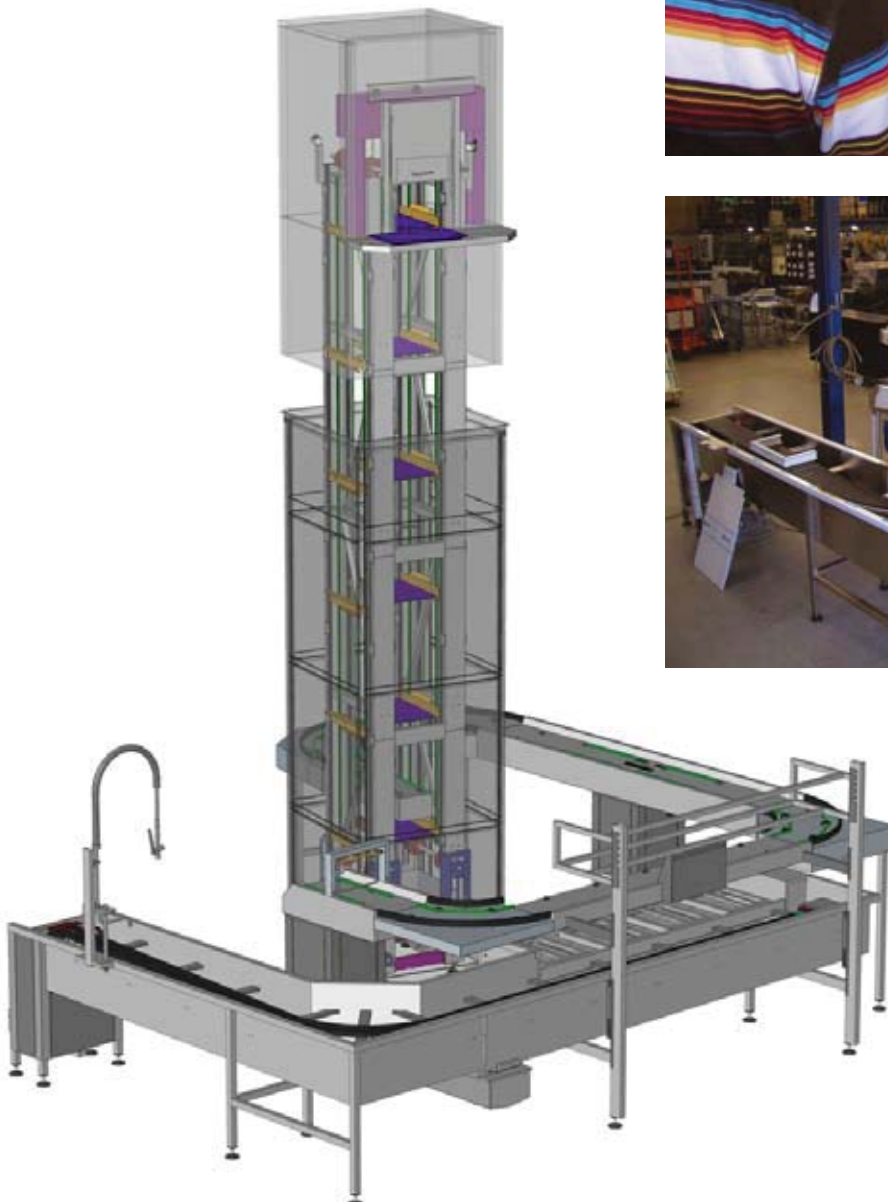
Features

- CE-norm
- Hygienic
- Reduced volume of waste 70%
- Reduced waste-handling
- No contact between clean circuit and and waste circuit
- Programmable Logic Control (PLC)
- Automatic circuit cleaning-system
- Capacity: about 360kg food-waste per hour



Special Design

Our specialists design and build solutions to suit every specific situation. Reliability, hygiene and optimization of ergonomic aspects result in a reduction of operating costs of large-scale catering facilities.





Tray elevator platform system

Rendisk vertical tray-transport system for a constructional shaft. Continuous running chain system with built-in tray support (platforms) for soundless operation and high capacity. A flowing take over of the trays in and out of the elevator is achieved by a horizontal transfer of the tray supports. Construction of the elevator shaft by a third party.



Features

- **Traysize 325/375x460/530 mm.**
- Max weight per tray 30kg.
- **Capacity 600 trays***
- Working height 900mm.
- Output height with Ergosystem 1185mm + 20mm, with Convesystem 900mm + 20mm.
- Constructional recess in the floor min. 1200/1200mm.
- Motor 1kW 230/400V.
- Stainless steel switchboard cabinet IP65 with PLC Siemens control 24V and display with symbols.
- Automatic tray-intake unit, 750-1000mm long, motor 0.18kW, height-detection, approximation-sensor and a swing-back safety cover s/s (CE).
- Rendisk diagnostic text display.
- Firehatch.

Features

- **Traysize 600/400/400 mm.**
- Max weight per tray 50 kg.
- **Capacity 800 - 1000 trays*.**
- Deposit height 900 mm.
- Output height with Ergosystem 1185 mm + 20mm, with Convesystem 900mm + 20mm.
- Constructional floor penetration (lxb) minimal 1100x1000 mm.
- Motor 1 kW 230/400V.
- Control box Stainless Steel IP65 with PLC Controller.
- Automatic tray-feeding unit, length 750-1000 mm, motor 0,18 kW, height detection, approximation sensor and stainless steel safety cover (CE).
- Rendisk diagnostic text display.
- Firehatch.



Working direction



Working direction

*)The actual capacity is dependent on the height of the products (e.g. bottles) on the tray. The in and out take is checked by built-in sensors linked to a Siemens PLC.

Special Design

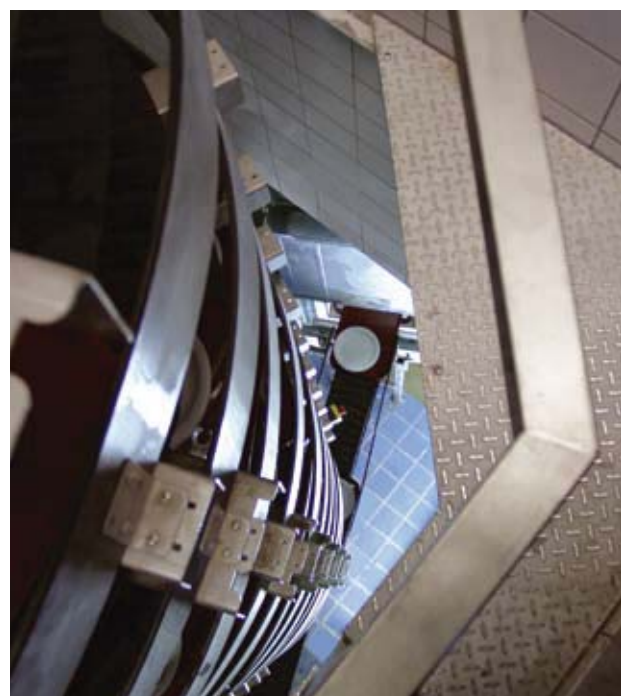
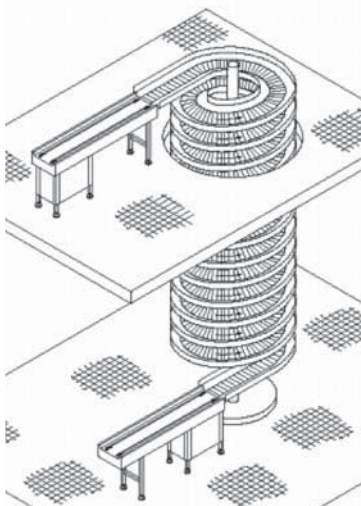
Tray elevator flex system

Rendisk vertical tray elevators for a constructional shaft. Continuous running flexsystem. The trays are taken in and put out directly from/to the conveyor table. The flexible strips 220mm are made of polyoxymethyl. Construction of the elevator shaft by a third party. The Rendisk elevator is propelled by just one motor with a fixed axis in the centre which has a transmission to the horizontal parts. To prevent vibration of trays the machine has a slow start and a slow stop controlled by a frequency transformer which drives the transport motor.

Features

- **Traysize 325/375 x 460/530 mm.**
- Max weight per tray 20 kg.
- **Capacity 1000-1200 trays*.**
- Working height 900 mm.
- Output height with Ergosystem 1185 mm + 20mm, with Convesystem 900 mm +20 mm.
- Constructional recess in the floor minimal 1800/1800 mm.
- Motor 1 kW 230/400V.
- Stainless steel switchboard cabinet IP65 with PLC Siemens control 24V and display with symbols.
- Rendisk diagnostic text display.
- Firehatch.

*) The actual capacity is dependent on the height of the products (e.g. bottles) on the tray. The in and out take is checked by built in sensors linked to a Siemens PLC.



References





Hospital Ikea	Odense, Denmark Several locations, Netherlands
Center Parcs	Several locations, Netherlands, (and Europe)
Hospital Barcelona Shell International	Barcelona, Spain Several locations, Netherlands
ABN-AMRO	Several locations, Netherlands
Academical Hospital Schiphol Airport	Brussel, Belgium Amsterdam, Netherlands
AKZO NOBEL ESA-ESTEC	Oss, Netherlands Noordwijk, Netherlands
Academical Hospitals	Several locations, Netherlands
Eurocontrol IANS Taurus Menü Service	Luxembourg Neu Anspach, Germany

Cisco Systems	Amsterdam, Netherlands
European Patent Office (EPO)	Rijswijk, Netherlands
Augustinus Hospital KPMG Accountants	Antwerp, Belgium Several locations, Netherlands
Pricewaterhouse Coopers ING-bank	Several locations, Netherlands Several locations, Netherlands
AZ Nikolaas	St. Niklaas, Belgium
Ministries	Several locations, Netherlands
Astra Zeneca Army of France	Lund, Sweden Several locations, France
Bedales school Lufthansa	Hampshire U.K. Frankfurt, Germany

“Rendisk sorting system put our dishwashing room on a higher level”

Taunus Menü Service GmbH has moved 2,5 years ago to its new location in Neu Anspach, Germany from their previous premises in the central kitchen of the Hochtaunus- Clinic. They produce 3500 meals every day. A part of these meals is directly portioned; the other part is transported as a multi-portion.

At the moment, the proportions are; 60% convenience and 40% own production. In the future they expect the percentage of convenience to increase because specialists more often prepare for example, custom made meat products.





Searching outside the borders of Germany

Before setting up a plan for the new location, Taunus Menü Service researched the requirements of a modern production kitchen. An in depth search was undertaken throughout Europe and outside the German border. Evaluation of market changes and future requirements were undertaken to ensure the new premises would be prepared for change. The new system had to be perfect and adaptable to meet customer needs.

Preparation has to be good

“Concerning the new dishwashing kitchen we wanted a well thought out sorting system. In our previous location the sorting was labour intensive and costly on time increasing stress for all the work force. Our new dishwash facilities we have two systems operating three times daily completing (3 x 600 pieces) and further bulk. Our research and attention to the logistics of sorting in the dishwash system was vital to the efficiency of the whole dishwash operation.”, according to Mr. Bennerscheid, responsible for this cook-and-chill kitchen.

Sorting unit high-low

“We finally chose the Rendisk high-low sorting system. The system is robust and shows quality. Our choice has led to a positive result. Previously there was many criticisms: the climate in the dishwashing kitchen, the bad ergonomics, bad sorting and the conflicts that arose through the work conditions. So the sickness rate was very large; up to 50%!

Satisfied

In the new location the working climate is much calmer and the Rendisk high-low sorting system is ergonomically justified. So the working conditions are good now! The illness overhead has decreased to 3%! “Additional advantages of the new system are: reduced crockery breakages during the sorting and washing phase and we can do the dishwashing with four employees in stead of five. Our new sorting system puts our dishwashing kitchen on a ‘higher’ level. We are very satisfied!”

rendisk 



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