

DISKOMAT

advanced dishwashing



A modern way of thinking

A modern dishwashing area focus on people, hygiene, environment and profitability and use significantly less resources.

A heart-warming sight

Each day is a new opportunity for us to preach an environmentally friendly idea that is fully achievable.

Crystal clear alright from start

A modern dishwashing area that serves its kitchen and restaurant in an efficient, environmentally friendly and responsible way, is based on a number of key perspectives.

A new dishwashing area from Diskomat that is seen and felt

Increasing energy costs reduce a company's profits. With energy-efficient solutions and work methods, companies can increase their profits and be more environmentally friendly.

Authorities, the public and customers are increasingly demanding that businesses use less energy and reduce their environmental impact.

Corporate commitment to environmental and social responsibility is an important strategic process that strengthens corporate identity and attracts the right employees and customers.

Diskomat creates modern dishwashing areas that focus on people, hygiene, environment and profitability. A dishwashing area from Diskomat uses considerably fewer resources and man-hours than traditional solutions. And with a modern way of thinking, your food waste become a resource, rather than a burden. The modern dishwashing area has a greater focus on efficiency and quality in serving the restaurant and kitchen. A well thought out approach combined with modern and appropriate equipment makes the washing process more efficient and hygienic.

Your employees avoid double handling and can look forward to a more pleasant and healthier environment.

Investing in a new and modern dishwashing area from Diskomat is a profitable and practical commitment to the environment, employees and guests. For us at Diskomat, it is important that the result of your investment makes a difference and is visible, measurable and tangible.

A systematic flow can be measured; what can be measured can be improved

Let us look more closely step-by-step:



More than 2700 projects throughout the world

Diskomat has completed more than 2700 projects in Sweden, Europe, Asia, Africa, America and Australia:

- 360 Hospitals
- 25 Catering industries
- 350 Schools
- 600 Staff restaurants
- 150 Food courts/Customer restaurants
- 100 Military restaurants
- 85 Flight catering kitchens
- 1 000 Hotels/Restaurants

Waste management

Traditional waste management

- Hygiene risks - intersecting flows
- Odours - dirty containers, leaky bags
- Heavy lifting and manual handling
- Man-hours spent cleaning garbage areas and containers
- Costs for refrigerated waste areas
- Fees for waste collection

Work flow, arrangement and procedures

The chaotic dishwashing area

- Dishwashing function neglected
- Poor service to the restaurant/kitchen
- Unclear procedures and tasks
- Stress, low status, sick leave
- Bottlenecks - double handling
- Sub-optimisations, poor investments
- Requires more man-hours and space
- High costs for breakages

Dishwashing equipment

Outdated dishwashing equipment

- Excessive use of (hot) water
- Excessive use of energy
- Excessive use of chemicals
- Pollution of lakes, sea, land and air
- High moisture, heat and noise level
- Strenuous work environment

Man-hours and work environment

Traditional dishwashing areas

- Dishwashing is heavy work with low status
- Wrong equipment puts loaded pressure on staff
- Impractical procedures causing double handling
- Requires more man-hours, costly
- Bad conditions - stress and conflicts

Ensuring hygiene

Undefined cleaning

- Excessive use of hot water
- Excessive use of energy
- Excessive use of chemicals
- Difficult access, unsafe hygiene
- Tedious and time consuming
- Biofilm remaining on surfaces
- Never completely odourless

Experience - dishwashing results

Experience

- Unreliable service, "cutlery coming soon"
- Doubtful visual impression
- Uncertain and varied quality of dishwashing
- Uncertain hygiene - lack of hygiene standards
- Stressed staff
- Cost centre for the restaurant

World-class waste management

- + Food waste becomes green energy
- + Suction of food waste directly to tank
- + Closed system - invisible, no odours
- + No intersecting flows
- + No heavy lifting or manual handling
- + Low fees for collection of food waste
- + No need for refrigerated waste areas
- + Saves time and space

World-class logistics

- + Clean items in the right place at the right time
- + High service level to restaurant/kitchen
- + Well trained and established procedures
- + Less stress, higher status, increased job satisfaction
- + Appropriate ergonomic equipment
- + Optimal flow frees up time and space
- + Minimises breakages

World-class dishwashing equipment

- + Measurable savings of energy and water
- + Reduced CO2 and chemical emissions
- + Measurable reduction of emissions
- + Comfortable humidity, temperature and noise level
- + Good ergonomics
- + Fewer man-hours
- + Good workplace

World-class dishwashing area

- + Right equipment relieves staff
- + Comfortable temperature and air quality
- + Established procedures, safer workplace
- + Fewer lifting, turning and stretching movements
- + Healthier staff, fewer vacancies, unfamiliar temps
- + Ability to adjust staffing to demand
- + Requires fewer man-hours

Foam cleaning - increased pressure

- + Low chemical usage
- + Controlled water temperature, usage and elevated water pressure
- + Reduced environmental impact
- + Complete cleaning in 3 steps
- + Microbiologically clean
- + Easier access, less work
- + Proven methodology from the food industry
- + Fresh and clean, smells good

World-class service

- + Excellent service to kitchen/restaurant
- + Clean items in the right place at the right time
- + Harmonic staff
- + Elegant table settings - stylish presentation
- + Clean, neat and spotless dishes
- + Great dining experience for guests
- + Dish management increases revenues
- + World-class environmental work

World class dishwashing areas and environmental work

Concrete results that make a difference

Restaurant service

- + The dishwashing area's distinct role increases the quality of the restaurant's service
- + High level of service to kitchen and restaurant
- + Hygiene guaranteed as required by law
- + Staff who perform with reduced stress
- + The time saved can be spent on customer service
- + Enhancing the overall experience among guests

Environment

- + Concrete, measurable and communicable environmental actions
- + Reduction of CO2 emissions
- + Reduced water and energy consumption
- + Less chemicals and eutrophication of lakes and seas
- + Modern waste management provides new renewable energy from food waste

Working environment

- + Less stress and congestion
- + Safe hygiene in the dishwashing area and the restaurant
- + Comfortable temperature and low humidity
- + Clear routines and duties provide a safer workplace
- + Status, participation and motivation, the dishwashing area is an essential service function that helps to deliver and generate revenue

Ergonomy

- + Fewer manual tasks
- + Reduced double handling
- + Better working posture
- + Less lifting, twisting and stretching movements

Economy

- + Fewer man-hours spent washing dishes
- + Reduced costs for energy and water
- + Reduced costs for chemicals
- + Well thought out investment - higher returns
- + Longer working life of the dishwashing area and dishwashing equipment
- + Less downtime
- + Less absenteeism
- + Lower or no cost for waste management
- + Fewer breakages
- + Efficient delivery system optimises the customer revenues

Recycle your food waste into green energy...

Food waste is biodegradable and can be used to produce biogas. The gas is used as vehicle fuel or in the production of electricity and heat. Biogas is the cleanest vehicle fuel on the market and releases significantly less environmental and hazardous emissions than fossil fuels.

Biogas has a prominent role in efforts regarding renewable energy sources and to reduce greenhouse gas emissions, reduce oil dependency and safeguard supplies. The EU fuel directive includes the target that at least 10 per cent of vehicle fuel in the EU should be renewable by 2020. In Sweden, biogas could potentially replace more than 12 per cent of the fossil fuels used today.

- A car can drive 2.5 km on a garbage bag of decomposed food waste.
- A car that runs on biogas avoids carbon emissions of 2,800 kg per year compared to a petrol powered car.

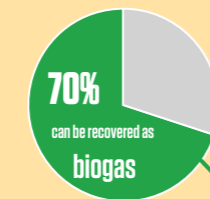
Sources: Avfallssverige (Swedish Waste Management), Naturvårdsverket (the Swedish Environmental Protection Agency)

...and minimise handling

Meanwhile, by harnessing the energy that is in your food waste you can reduce both costs and the time spent on waste management. Manual handling of dirty and heavy containers and sacks can be replaced by a collection system that easily grinds and sucks the waste into a storage tank. The system is completely closed and means that the process is hygienic, invisible and odour free. You no longer require cool areas for storing the waste, which means savings can be made in terms of space and energy.

Food waste is a resource

- 8 kg gives**
- Biogas = 1 l petrol
 - Fertiliser
 - Biogas gives 0 kg CO₂ emissions (1 l petrol gives 2.7 kg CO₂)



The optimal flow in dishwashing

Logistics is one of the key focus areas for businesses wanting to increase profitability and optimise their service. Logistics is about coordinating, managing and controlling the flows and use of resources by a business.

Diskomat's solutions are about far more than delivering dishwashers. Diskomat's idea is to deliver comprehensive solutions that optimise the washing process, including waste management and hygiene standards. Over the years, we have identified and documented the elements and processes in the dishwashing that can be developed and streamlined in order to optimise the dishwashing area's overall performance. The goal is to minimise the cost per dish of each meal served.

Satisfied employees and flexible staffing

Your employees in the dishwashing area are crucial to being able to offer your guests a fantastic experience. When they arrive at their workplace, it must smell pleasant, the temperature and humidity must be balanced and the equipment must function properly in order to relieve your employees of high loads.

Dishwashing processes with clear and well established procedures minimize bottlenecks and duplication, while also providing the basis for enjoyable and efficient teamwork.

A modern dishwashing area is tailored to various levels of demand, which allows flexible staffing and better use of time.



Benito Arvire
Dishwasher of the 2012

A modern dishwashing area is a heart-warming sight

When our customers communicate their environmental commitment and social responsibility to the market, we know that it is more than simply words. That is why each day is a new opportunity for us to preach an environmentally friendly idea that is fully achievable. - And that is truly heart-warming.

The interest in climate-smart, energy efficient, environmentally friendly and fair trade products is growing. At Diskomat we often receive acknowledgement that our dishwashing areas enable our customers in catering and restaurant businesses to go from words to actions when it comes to investing in environmental and social responsibility. We can confirm that they both result in better quality in their service and increased profitability in their operations. The result of the investment is also reflected in an improved working environment and greater job satisfaction.

A good impression

It is your dinner guests who experience and assess the quality of their visit to your restaurant. One could say that your restaurant competes for diners through your ability to deliver a wonderful experience. But the experience must be delivered at a reasonable price for the guest and at a reasonable cost for your restaurant.

A well thought out approach to dishwashing guarantees hygiene and a high level of service for the restaurant, uses less resources and makes the price reasonable for the guest. A positive and stress-free working environment for dishwashing and restaurant staff contributes to better service for the guest. A neat and tidy table setting is also critical for ensuring that your guests get a good impression of your restaurant. The work you are doing for the environment, and to create a better workplace, offers plentiful opportunities to communicate to all your stakeholders.



Smarter water use

Of the Earth's total water supply 2.5% is fresh water and we have access to just 0.25% of this. This is because fresh water is tied up in glaciers and deep under the ground.

Every year, more water is taken from groundwater than is naturally returned, and this has been going on for the last fifty years. The goal should be to only take as much as is returned naturally.

Dishwashing is obviously a water-intensive activity. Reducing water consumption in your dishwashing facility is one of the areas we focus on when we create the optimum dishwashing facility. Reduced water consumption during dishwashing means less water to heat up, in turn also makes water consumption an environmental and energy issue.

More efficient energy consumption results in less CO₂ emissions

Increasing energy costs reduce profits and this is most noticeable in the energy-intensive activities. There is little evidence that energy prices will fall.

In many industries, the discussion about energy efficiency is intensifying. The discussions are often about doing away with unjustifiably high energy costs, identifying where and how the excess energy is consumed and to gain control of their processes. Energy efficiency is profitable and helps to increase profits and reduce emissions of carbon dioxide and other greenhouse gases.

With a well thought out dishwashing area, excessive energy consumption can be reduced, for example through more efficient use of water.

Careful use of chemicals makes a difference for lakes and seas.

The Swedish archipelagos and maritime areas include more than 30,000 islands. This is unique and for many residents and visitors to Sweden, a trip to our archipelagos is an obvious and desirable summer activity.

Today, many of our lakes and sea coasts are highly eutrophic. This is being caused by the release of nutrients such as nitrogen and phosphorus, leading to hypoxia and in turn giving rise to dead sea beds. Of all the world's seas, the Baltic has the most dead sea beds and the increasingly large algal blooms are being caused by a combination of weather, climate and pollution. About 20 per cent of the phosphorus entering the Baltic Sea comes from phosphates in laundry detergents, cleaning agents and dishwashing liquid.

For the catering industry and restaurants, the dishwashing process needs to be quick and the dishes have to dry quickly. This requires the entire dishwashing process to be water efficient and to use more efficient and environmentally friendly detergents and drying agents.

With a modern dishwashing area, there is enormous potential to reduce the use of chemicals while guaranteeing hygiene and the quality of dishwashing. Reduced chemical use is an important step towards a greener catering operation and is a measure for reducing the cost of dishwashing.

1949 Nils Strinning designs string shelving.	1957 Dishwashing area equipment for catering kitchens. Roller conveyors and powered conveyors for trays and dishwashing baskets, sorting tables and elevators.	1959 Wire dishwashing basket. Dishwashing area for Berns.	1960 Conveyor chains developed in delrin plastic still in use.	1962 Plastic dishwashing baskets and cutlery boxes. Wire plate cassettes.	1963 90° and 180° powered turn tracks Carousel system for dumping of dirty dishes.	1965 Two-stranded chain conveyors with several curves.	1972 Switch trays from two conveyors to one conveyor.	1984 Nordien System develops new 50x50 cm baskets.	1985 Tray exchangers for tray dishwasher and magnetic cutlery pickers.	1989 PLC-controlled robot for sorting baskets.	1992 FCSI Award Distinguished development within the Food service Industry to the Nordien System.	1994 Automatic waste grinder with de-watering screw.	1997 Diskomat is acquired by Gösta Torssell.	1999 Slimline sorting table. Ergoman rinsing showers.	2001 Foam cleaning with increased pressure.
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Final outcome crystal clear from the start

A modern dishwashing area that serves its kitchen and restaurant in an efficient, environmentally friendly and responsible way, is based on a number of key perspectives. The project is initially about defining all areas of development and identifying any opportunities to create the optimal dishwashing area. With a clear goal, structure, communication and commitment in every phase, we ensure that all benefits are both visible and apparent in the dishwashing area, the restaurant and in the financial statements for many years to come.



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Basic data collection

The right dishwashing area solution begins with a thorough collection of information about the business. A collection of facts, such as the type of restaurant/catering establishment, the flow of dirty dishes and pot washing, volumes and types of dishes, storage of dishes, opening hours, anticipated developments and available space.

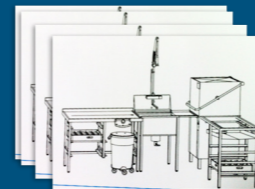


Dishwashing area for 50-500 meals each day



Quick start-up with modular based systems

With our compact and space-efficient standard solutions, you can quickly upgrade your kitchen with a modern and efficient dishwashing area.



You receive a complete system for both dishwashing and waste handling, including storage of dishes and cleaning of the kitchen and dishwashing areas. Choose from our adaptable efficient standard solutions.

Three steps to a complete solution:

1. Collecting facts: available space, number of meals per day
2. Choice of standard solution, proposed adaptations and quote
3. Delivery, start up and guarantee

Start serving

The new dishwashing area is ready to accept the goods from the restaurant and kitchen. You experience a comfortable temperature, odour and noise level, less heavy lifting and twisting and better hygiene. Staff feel better and are more efficient. The quality of your dishwashing and service is clearly noticed by your staff and guests.



Service

If you choose to sign a service contract, you can expect a quick response whenever you need support and service. Diskomat knows your business and how your dishwashing process is structured. Our distributors make it easy for you to add suitable accessories.



Development of a simple outline sketch

From this basic data, assessments can be made concerning how the flow, space, equipment and personnel can be organised to create an optimal dishwashing process. All parties involved have a common view of the dishwashing process before continuing. Work environment, ergonomics, environment and economy are all considered.



Inspection, handover and training

In order to achieve the set goals, the staff must work correctly. Diskomat trains users in the new dishwashing process as well as in health and safety management. Technical staff are trained in the machine operations and troubleshooting. All technical documentation is handed over to the users.



Food distribution and tray setting

For all food distribution, it is important to maintain the right temperature for both hot and cold components. Trolleys with integrated cooling and contact heat offer the simplest and safest handling.



In the central kitchen, we see a logical connection between the dishwashing process, tray setting and trolleys for food distribution.

With a systematic flow and good management, we achieve:

- Hygiene for patients**
- Safe cold chains that are not interrupted
 - First contact with clean dishes when setting trays
 - Each tray is at the right temperature and cold contents are kept cold
 - The trolleys, tray and bulk, can be washed in the trolley washer

- Good work environment and ergonomics for staff**
- Tray setting at room temperature even for cook/chill
 - No double handling of clean dishes
 - Comfortable working and serving heights
 - Trolleys can be cooled at room temperature

- Low energy consumption**
- Rapid cooling, only the trolley's interior is refrigerated
 - Individual heating to the right temperature
 - Refrigerated rooms for trolleys and tray setting not required

- Lower operating costs**
- Avoiding duplication of work
 - Lower energy consumption for cooling and heating

- Lower investment**
- Fewer trolleys and smaller space
 - Cold room only for food and dishes

Structured project planning

When it is time to compile an enquiry and a set of requirements, our expert project managers are ready to support both clients as well as catering consultants. We have identified development opportunities and know the benefits and improvements that your new dishwashing area can provide.



Production, installation and testing

Diskomat's project manager will ensure that the project is proceeding according to plan and is the client's contact at Diskomat. Our technician is responsible for assembly and inspection before delivery, and for the installation. After installation, the technician checks that the system works according to requirements.



Drawings

It is time to develop a detailed drawing with all positions shown and descriptions of equipment and materials as a basis for the procurement. The specifications also contain information about the effect of power connections, pipe dimensions, drains, ventilation, etc.



Clear quote with fixed price and according to specification

We are now in the procurement phase and have a clear and structured tender document. Diskomat provides your contractor with a comprehensive quote with fixed price. You can be confident that the price will not creep up, and that Diskomat will deliver the dishwashing function you expect in accordance with the specifications.



Design

Our project manager, who has been involved from the beginning, and one of our technicians are now connected to the project. The order is clarified technically. Design drawings are prepared; products and parts are ordered. The drawings go to the building contractor with the requirements for floor surfaces, ventilation, drainage, electricity, water.



2002

Electro Calorique food trolleys introduced in Sweden.



2005

Diskomat responsible for Nordien System in Sweden.



2010

Diskoflex - Component based system for dishwashing.



2011

Diskoflex dispenser trolley compact and stackable.



2011

Eco Waste Away - System for grinding and sucking away food waste.



2012

SKBF = FCSI



2014

Thomas Dörr Cutlery Wrapping Machine and Cutlery Polisher



2014

Self-developed Sack Trolley



2016

Mobile Car Lift Food Distribution Trolleys



2016

Stainless Steel Equipment



2016

Update of Plate Cassettes



2017

Update of Trolleys and Racks



2017

Tipping basket, Diskoflex 1



2021

Automatic emptying of tray trolleys



2022

WD-18CW Auto Input and Output



2024

Flight Catering Trolleys



World-class dishwashing

Complete systems for dishwashing
- including waste management and cleaning

The dishwashing area's role

- is to serve it's kitchen and it's restaurant with clean and fresh dishes so that meals can be served in an attractive, safe and efficient way.
- is to handle the kitchen's and the restaurant's food waste in a hygienic and environmentally effective way.
- is to deliver its services at the lowest possible cost and with the least possible impact on the environment and people.



Technical resources

In our 1250 m2 workshop, there is continuous development and improvement of new and existing products. Equipment is also assembled and tested before dispatch and final assembly in the dishwashing area that it is intended for.

Our stainless steel products are produced by selected contract manufacturers.

With our specially designed AutoCAD system and Inventor (3D), we get a good picture of all pending dishwashing areas as well as a more effective communication with customers and other stakeholders involved.

Ensuring quality

A general quality plan and a specific quality folder with all the individual activities is established by us and is continually reported to the customer in all major projects.

Would you like to know more?
Scan and visit our website



Knowledge and experience

Once your new dishwashing area has been delivered, this does not mean that our relationship is over. Quite the opposite. We live with your dishwashing area for many years to come.

Knowledge, innovation and dedication have been our hallmarks since the 1950s. The fact that we live alongside our dishwashing facilities throughout their life cycle means we are continually adding new and important experience and knowledge.

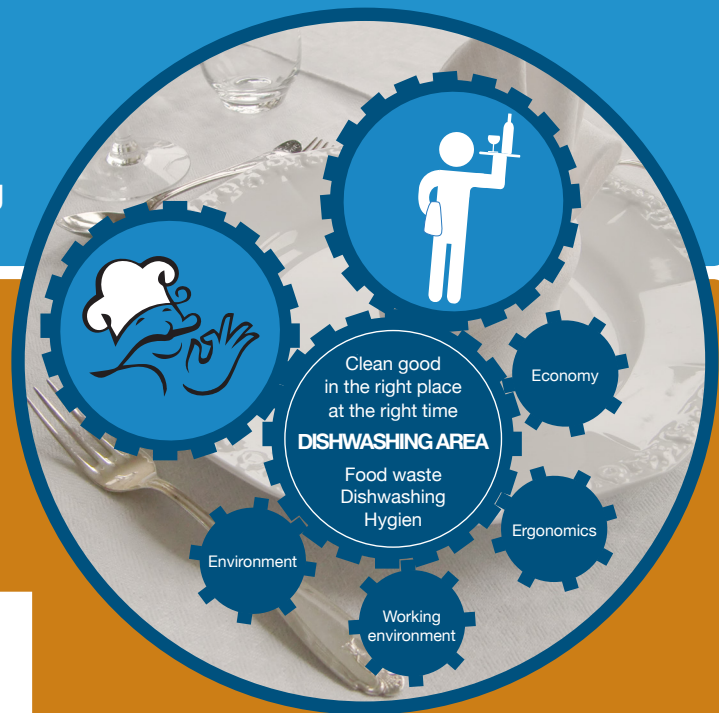
Our employees are involved in the entire project, from layout, planning and design to installation, commissioning, training and service. As new opportunities arise and new technology becomes available, we also assist with adaptations to your dishwashing area.

Our vision is to realise your ideas and create dishwashing areas, methods, equipment and products that are world-class. These are the challenges that drive and motivate our employees to remain in the company and thereby build up invaluable expertise.

Knowledge, communication and action

The business management, marketing managers, product developers as well as project managers are engineers and designers by profession. They are highly specialised in the logistical, technical, economic and hygienic matters required for a dishwashing area.

Our service and installation technicians are well versed in our facilities, which simplifies troubleshooting and service. Our personnel help you to find the right person for your question.



The heart of the restaurant's service:

A dishwashing area has a central role in a restaurant's idea of giving its guests a fantastic experience. The meal being served not only has to be delicious and hygienically safe. Guests also expect beautifully plated food with clean and spotless plates and cutlery and beverages served in glasses that shine.

Our services

1. Dishwashing areas with improved overall economy

100 to 65,000 guests every day. Opportunities to improve efficiency, environmentally adapt your dishwashing area and improve service to your restaurant. A world-class dishwashing area with the right processes and right equipment.

2. Food waste becomes green energy

Eco Waste Away our collection system for food waste that is easily converted to new, green energy.

3. Cleaning – quicker and with reduced environmental impact

Microbiologically clean surfaces in less time. Reduced water and energy consumption. Controlled dosage reduces the use of chemicals.

4. Accessories, handling and storage

The right accessories in the right place at the right time reduces breakages, create order and frees up time and space. More focus on serving the guests.

5. Food distribution/ tray setting

Trolleys with active cooling and heating offer the simplest and safest handling when distributing meals. The correct flow and handling when tray setting ensures hygiene and less duplication of work.

6. Service and guarantees

Preventive service provides less downtime and greater service life for your facility. An agreement with us gives priority access to our service. We will visit you on two to four occasions every year.

2025

Tray handling with
Round Belt Conveyor



The future

.. is the place where we strive to be, to identify new demands, challenges and opportunities. And to convert them to new solutions and work procedures.

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