

M-iQ

Flight and rack type dishwashing machines





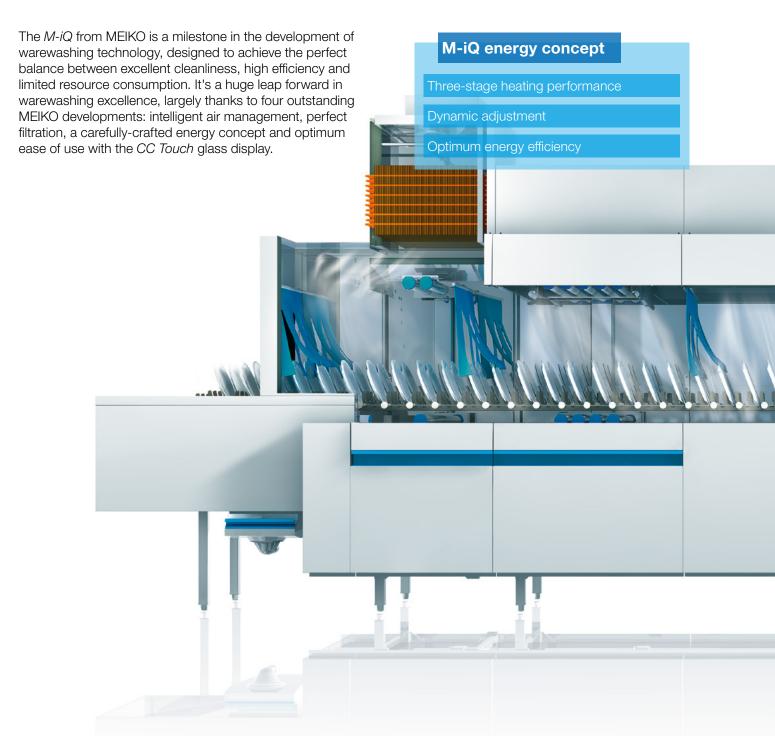
M-iQ - All-in-one warewashing technology for people and the planet



What's the secret to hygienic warewashing? More water? More energy? At MEIKO, we believe it ultimately comes down to being smarter! That's why we're constantly striving to make our warewashing technology even better. Exciting new technical innovations are a key part of our business, but we never lose sight of the big picture of people, nature and resources. Our vision is to create sustainable warewashing technology for a cleaner environment and a cleaner world – without neglecting hygiene. At the forefront of our mind when we are designing products is how to use resources efficiently: things like water, power, and chemicals. Our clever planning system for your dishwashing area is a key part of this. The M-iQ can help to save time and money, thus increasing efficiency. Ergonomic processes take the strain off your staff and automation can help you combat staff shortages. Challenges in the dishwashing area? **The M-iQ is the clean solution.**



M-iQ highlights





M-iQ GreenEye-Technology®

- > Human-machine teamwork
- > Hassle-free warewashing process
- > Capacity optimisation helps save resources



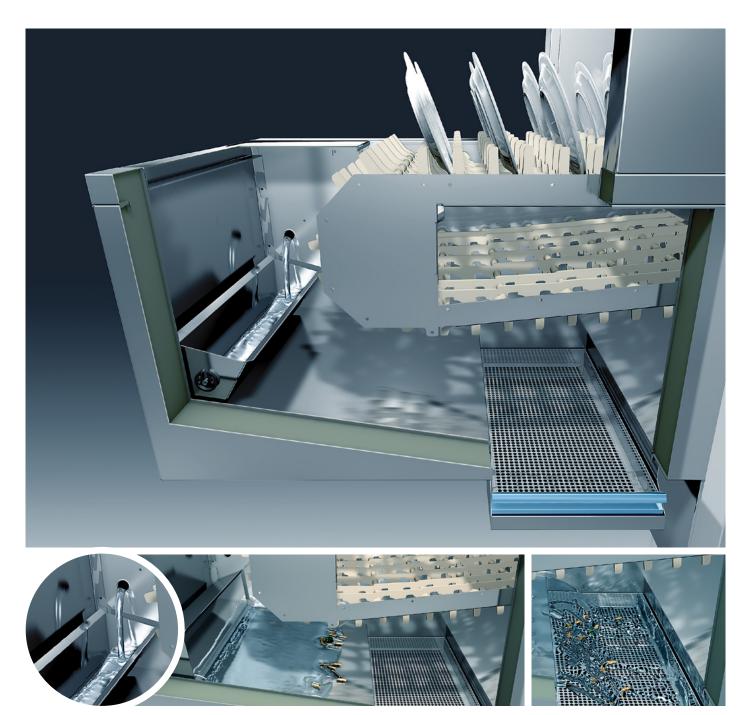


M-iQ pre-washing

A clean start

MEIKO gets off to a hygienic start as soon as the washware enters the machine feeding section, using powerful

blasts of water at regular intervals to automatically wash off any food waste – just like a big, cleansing waterfall!



The machine collects the process water and then uses powerful torrents of this water to wash food waste into the scrap screen.

M-iQ filter

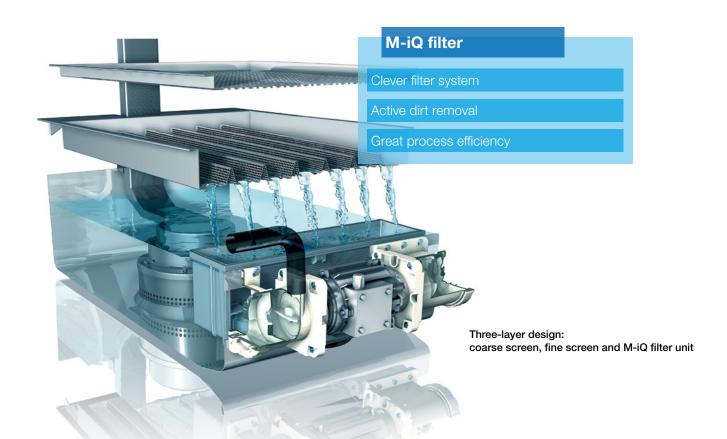
In harmony with the environment



One of the most impressive features of M-iQ machines is the M-iQ filter. This filter system collects food residue from the water and periodically washes it out of the tank – without requiring any additional water. This is how the filtered food waste is actively removed from the warewashing process.

The result: optimum cleanliness with low consumption of detergent and water.

The clean solution – the original *M-iQ*.

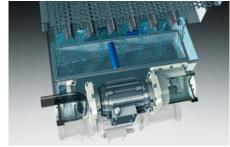




Food waste is continuously filtered out of the wash process by a coarse sieve and a self-cleaning fine filter.



Periodic backwashes remove accumulated food waste from the tank.



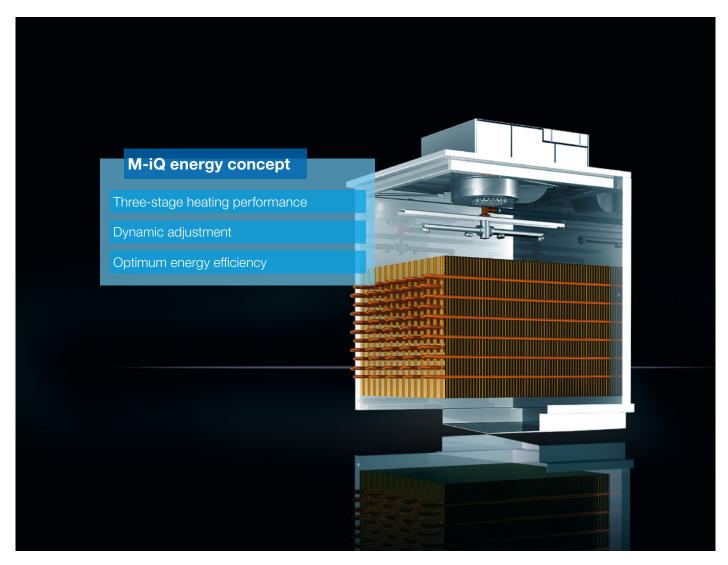
With food waste removed from the system, the wash water is cleaner and more effective – and no extra water is required.

M-iQ energy concept

Energy like never before

All the processes in the M-iQ are designed to recover heat and channel it back into the system through an innovative process of energy management and control. Thanks to

its special, dynamic adjustment, the M-iQ makes carefully controlled use of valuable energy. That means lower energy costs as well as all-round improvements to the indoor climate in the dishwashing area.



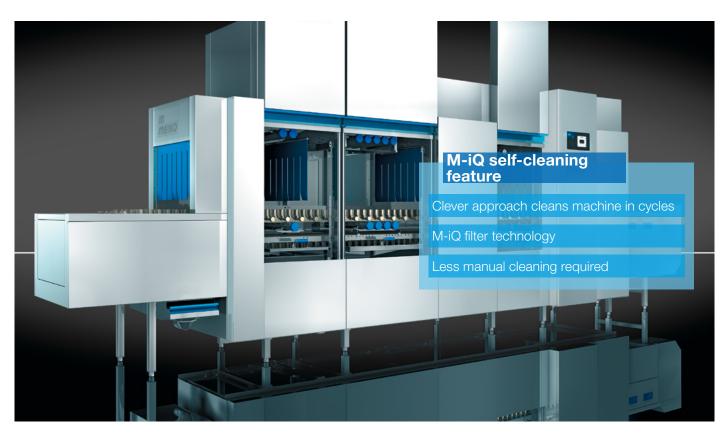
A three-in-one strategy for perfect results: heat recovery reduces the machine's energy consumption, exhaust air output and exhaust air temperature to optimum levels.

M-iQ self-cleaning feature – the blue operating concept makes it easier than ever to get machines clean



Even after a long day of warewashing, the *M-iQ* is still keen to play its part. Using the tank water that is already in the system, it finishes the shift by cleaning itself! This machine flushes the dirt through the *M-iQ* filter with just a single fill of the pump final rinse zone. This continues at periodic intervals until the machine is empty.

All that remains to do is to manually clean the small number of areas that are marked in blue. With the head start provided by the automatic pre-clean, that is convenient, thorough and fast.



The M-iQ's intelligent self-cleaning programme reduces the workload for staff compared to fully manual cleaning, making the system more cost effective to run

The tank water cleans itself step by step in an intelligent, cascading system



M-iQ washing dynamics

30% increase in washing performance*

The *M-iQ* drives MEIKO's renowned cleaning performance to even greater heights! Powerful cleaning with a third less resources and energy when compared to the previous machine line, the B-Tronic. A truly polished performance!



^{*}as compared to the previous machine line, the B-Tronic

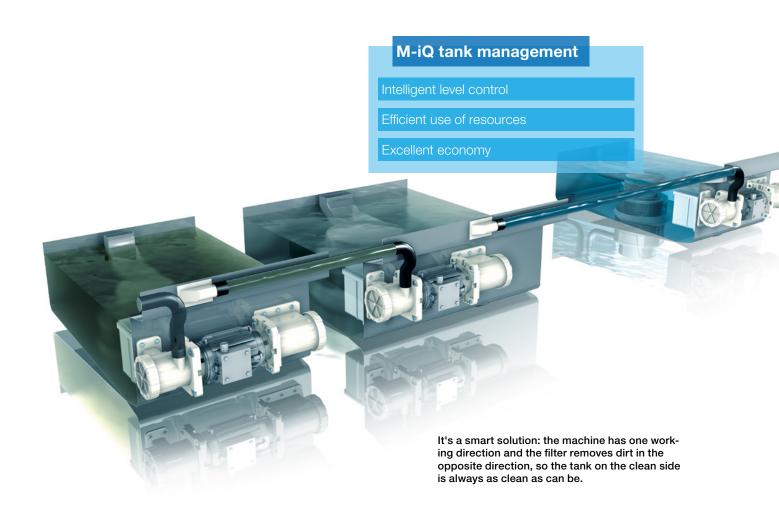
M-iQ tank management

Taking hygiene to a whole new level



As you would expect, our tried-and-tested *M-iQ filter* is hard at work in every single tank. Together, the filter and tank make an outstanding team.

But the really clever part is how the filter system works in the opposite direction to the movement of the dishes. Any residual dirt is collected and concentrated well away from the clean washware in the hygienic area, so the clean side stays genuinely clean at all times. We also keep an eye on the water level within the tanks. The *M-iQ filter* monitors the process and channels the water into the next tank – or into whichever tank currently needs water.



M-iQ AirConcept

Doing away with hot air

M-iQ machines use specialist MEIKO airflow technology. Known as *AirConcept*, it delivers hygiene safety, full adherence to DIN standards and outstanding energy efficiency. The air is channelled from the hot, clean side of the machine to the cool feeding zone. This prevents contamination while simultaneously harnessing valuable heat for the wash process.

The integrated heat recovery module eliminates the need for a direct exhaust air connection by making the exhaust air cooler and reducing it to a minimum. As well as the hygiene and environmental benefits, this also makes the working environment much more comfortable for machine operators by keeping hot air out of the unloading area.





Cool: steam and vapour are cooled by diverting the flow of heat, giving the M-iQ a new burst of energy for effective warewashing.

M-iQ AirComfort drying

All-round perfection with new AirStream technology



The airflows in the *M-iQ drying zone* are effectively decoupled from the wash zone thanks to specially designed equalisation openings (AirComfort drying) and carefully guided airflows (AirStream technology). This achieves

all-round excellent drying results while retaining valuable energy at all stages of the process. It also makes a huge improvement to working conditions at the discharge section.

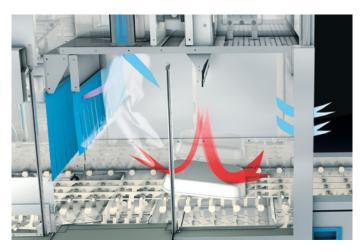
M-iQ AirComfort drying

Excellent drying results



The superb drying performance of M-iQ AirComfort!

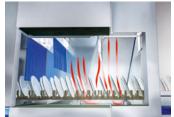
The airflow is effectively decoupled from the wash zone by a series of specially designed equalisation openings. This significantly improves working conditions for people at the discharge section. The airflows that begin here and move through the wash zones form the basis of the specialist M-iQ AirConcept.



Superb drying results even when using M-iQ to wash containers! Even if the airflow is disrupted, the special openings maintain optimum drying conditions by letting in additional air. This also promotes stable airflow through the wash zones, ensuring excellent energy efficiency and consistently low running costs.







Drying excellence with incredible M-iQ AirStream technology!

Improved energy efficiency with

Setting standards in user-friendliness

four guided airflows

Four air circuits produce specially guided airflows that are effectively decoupled from the wash zone. This keeps the energy inside the system and ensures perfect drying results. The flexible air nozzle used in our flight type dishwashing machines adjusts to the different heights of the washware, keeping the airflow at an optimum distance from the washware. This air cycle is now sealed on all sides, boosting energy efficiency and preventing warm, humid air from escaping at the discharge point. That makes the system more user-friendly than ever.

M-iQ control system

All the information you need – whenever you need it

The brain of the *M-iQ* is its intelligent *BLUEVISION* control software. All the warewashing processes can be operated from the *CC Touch* glass operating panel. Rather than a long, confusing list of options, this display only shows menu items that can actually be used at each point in time. This makes life easier for the machine operator. The user-friendly control system includes a generously-sized TFT colour display that guides the operator, helping them to ensure that everything is running smoothly.

The ergonomic *M-iQ display* caters to each specific user group (kitchen managers, dishwashing staff, service, etc.), providing comprehensive information at the touch of a button that can be saved for later use. Incredible convenience for authorised users: easy, direct access to the control system to systematically define and optimise processes. The *M-iQ colour display* offers a very high resolution which renders graphics, icons and fonts with exceptional brilliance and sharpness.







Alternative to the MEIKO Connect app The CC-Log data module offers an easy way to transfer operating data via Bluetooth.

The built-in system diagnostics feature keeps users up-to-date at all times. As soon as the M-iQ is switched on and booted up, it starts a dialogue with the operator, with the dynamic progress bar and dedicated status indicators clearly signalling that all the machine's functions are ready for use. As well as communicating key process data, the display also draws the user's attention to any deviations or discrepancies. Even when it's up and running, the M-iQ is continuously checking all its systems and functions to ensure maximum hygiene and reliability at all times.

The smart cockpit of your dishwashing machine

MEIKO Connect makes it easier to monitor professional kitchens. Simply use your smartphone to monitor all the essential machine and hygiene data for your MEIKO dishwashing machine – it couldn't be easier!





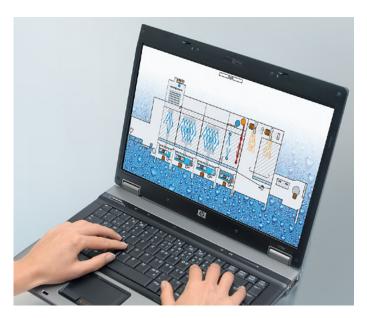
M-iQ technology also offers users the option to browse comprehensive data online (*CC-Insight*), on a smartphone, or through the CC data module.

New: one-click economy management (optional)
Precise readings of energy and resource consumption
(water, detergent, rinse aid) give detailed insights into the
efficiency and cost-effectiveness of the warewashing

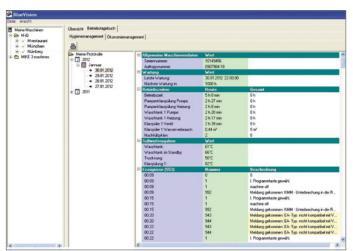
process. The *CC-Insight* software module with economy management lets you view your consumption patterns in graphical or tabular form. This gives you the data you need to analyse and optimise your machine's capacity utilisation and individual wash processes.

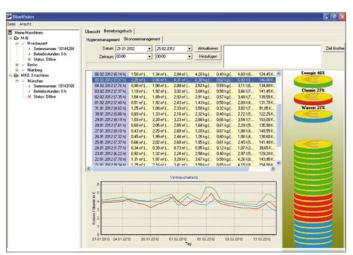
M-iQ. High-IQ warewashing – intelligent access to all the data you need.





All system-relevant data, functions and operating processes are stored and displayed by the built-in *Gateway*. Operating conditions are analysed and diagnosed, and can easily be changed on the computer where necessary.

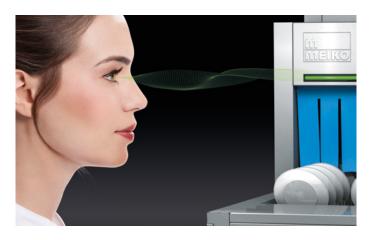




In-depth analysis: CC-Insight with economy management

M-iQ GreenEye-Technology® Green light for cleanliness

M-iQ GreenCoach Always on the right track



M-iQ GreenEye-Technology® enables genuine human-machine teamwork, leading to concentrated efficiency, greater transparency and a more enjoyable working environment.

The light that guides the way: GreenEye-Technology® not only identifies gaps and adjusts performance accordingly, it also analyses the gaps on the operator's behalf, thereby providing them with active support in operating the dishwashing machine at maximum efficiency. It offers clear recommendations at the feed point, with green lights showing users how to make optimum use of belt and line capacity. M-iQ with GreenEye-Technology® essentially represents a whole new way of working, with efficient and hygienic warewashing performance guaranteed at all times!

- > Human-machine teamwork
- > Hassle-free warewashing process
- > Savings from optimised capacity utilisation

Detect, react, evaluate, recommend, monitor: that's the principle behind the intelligent M-iQ GreenCoach system, which helps the machine detect gaps between items on the conveyor belt or between racks. The system responds by only activating the rinse function for specific sections of the belt where dishes have been detected - and the machine can do this while monitoring up to three lines simultaneously. All the gaps on the belt are evaluated with the utmost precision and unparalleled accuracy: save up to 50% fresh water and rinse aid consumption compared to the same *M-iQ* model without *GreenCoach* technology.



The final rinse function is only activated for sections of the belt that actually contain dishes.



should be loaded with washware at the feed point. This enables the



M-iQ GreenFilter

Your next step towards cleanliness



We regard perfection not as an unattainable vision, but as a day-to-day challenge! This proactive approach led MEIKO engineers to develop an additional filter stage – the *GreenFilter*. This actively removes even the tiniest particles of dirt from the machine.

The *GreenFilter* also actively reduces the use of fresh water by about 10% in comparison to the equivalent *M-iQ* model without *GreenFilter* technology. And it only deploys detergent and rinse aid where they are actually needed. *M-iQ* machines are dynamic systems designed to handle

complex tasks, so the doses of chemicals they inject are precisely tailored to variations in conveyor-belt speed and changing concentrations of dirt on the washware. GreenEye-Technology® minimises the cost of detergent and rinse aid. Energy costs are lower too, because the entire warewashing process only uses the resources that are actually needed.



^{*}in comparison to the equivalent M-iQ model without GreenFilter technology

M-iQ synergies

The big picture

M-iQ machines with specialist GreenEye- $Technology^{\circledast}$ create new human-machine synergy. By making warewashing more dynamic and more transparent, they continuously optimise the warewashing process to deliver excellent efficiency and optimum capacity utilisation. These synergy effects extend beyond the machine to encompass the whole kitchen area, merging operators and the M-iQ

machine into an outstandingly efficient, self-contained unit – and leaving kitchen managers to focus their attention on their leadership tasks. Less supervision is required, and the whole operation becomes more eco-friendly.

GreenEye-Technology® keeps everything under control and never loses sight of the big picture. So that's a green light for a cleaner and more efficient future!



M-iQ platform concept

Fits like a glove.



MEIKO has many years of experience in building flight type dishwashing machines. The *M-iQ* range builds on this experience and continues the MEIKO success story. The *M-iQ* flight type dishwashing machine washes plates, cups and trays quickly and hygienically. User-friendly operation and outstanding performance make the M-iQ popular among staff – and a hit with managers! That's because the *M-iQ* does a great job of combining economical operation with eco-friendly credentials, delivering real benefits for people and the planet.

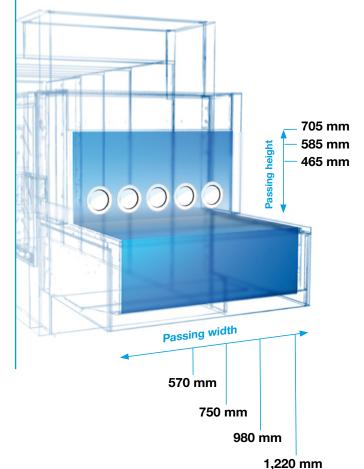
However you plan to deploy your *M-iQ* machine, the modular nature of *M-iQ* technology means that it can be tailored to all sizes and formats. So a *M-iQ* is always a great choice!

The available conveyor widths and heights make optimum use of space to ensure efficient operation. With such outstanding versatility, *M-iQ* machines fit perfectly in any setting.



The perfect all-rounder: *M-iQ* machines offer user-friendly operation and a wide range of belt formats. With so many feed options and finger widths available – plus numerous specialist belt conveyors for hotels, canteens and hospitals – there really is something for everyone!

Whatever your requirements, MEIKO has the solution you need. MEIKO rack type dishwashing machines fit the warewashing process like a glove, making life easier for everyone involved in the dishwashing area. The *M-iQ* rack type dishwashing machine upholds this impressive tradition, offering tremendous versatility to deal with an ever-changing array of dish and cutlery formats. Warewashing staff benefit from ergonomic handling and a wide selection of table configurations.



With a choice of belt conveyor sizes and passing widths, M-iQ machines can be perfectly tailored to any situation.



The right choice: MEIKO believes that technology should serve people and the planet. Its *M-iQ* machines set new standards of hygienic and economical warewashing while reducing consumption values to an absolute minimum. One rack at a time.

M-iQ GiO-TECH – built-in reverse osmosis technology for M-iQ flight and rack type dishwashing machines

Integrated *GiO-TECH* technology (optional) removes almost all minerals from the water, as well as bacteria and viruses. This ensures that only the purest water is used for the final rinse. Pure water is the key to brilliant and hygienic rinsing

results – from cutlery and dishes to glassware and containers. With its simple, compact design, the *GiO-TECH* module is a great addition to any planned installation!



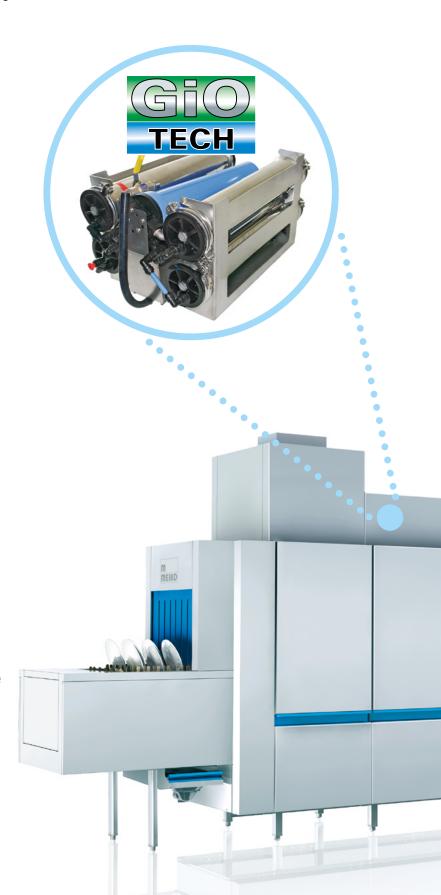
MEIKO GiO-TECH Brilliant for planning

- Everything from a single source
- Eliminates need to coordinate 'separate' RO and warewashing systems
- Only one water connection required
- Doesn't take up any additional space
- A more cost-effective way to plan your investment



MEIKO GiO-TECH Brilliant for after-sales service

- Dishwashing machine control system monitors the GiO-TECH unit
- One-size-fits-all format significantly reduces number of spare parts
- Only one machine to be maintained
- No consumables required
- Reduction in after-sales costs
- Remote diagnostics available



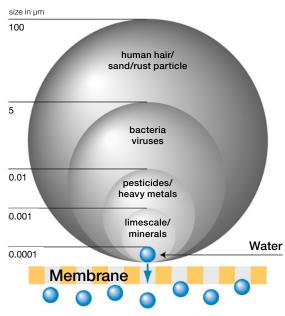


The *GiO-TECH* module comes in a one-size-fits-all version, making it a great choice for service and support. Customers appreciate how quickly *GiO-TECH* pays for itself – and its brilliant results make a fantastic all-round impression. *GiO-TECH* also minimises resource use while maximising

cleanliness, making it a brilliant choice for eco-friendly, hygienic warewashing!

It's the perfect illustration of our motto: 'MEIKO, the clean solution'.

How MEIKO GiO-TECH works



Particle sizes compared: pure water molecules can pass through the membrane.



MEIKO GiO-TECH Brilliant for customers

- Sparkling and hygienic washing results
- Gentle on washware
- Makes life easier for staff
- Reduces capital and operating costs
- Sparkling washing results create a great impression





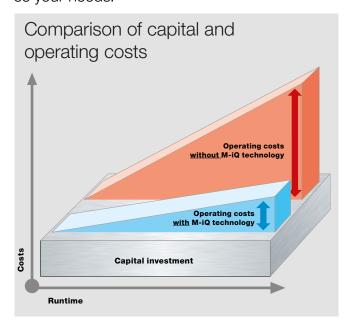
MEIKO GiO-TECH
Brilliant for the environment

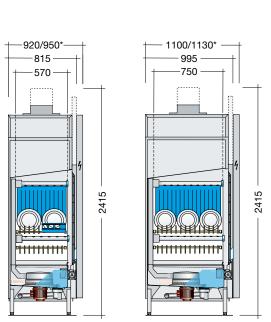
- Further reduction in chemical use
- Reduces hygiene risks

M-iQ sample models

Examples of available M-iQ models and sizes

S and M models based on example of two rack type dishwashing machines. L and XL models based on example of two flight type dishwashing machines. With this much flexibility on offer, you can be sure of getting a basic configuration that perfectly matches your needs!

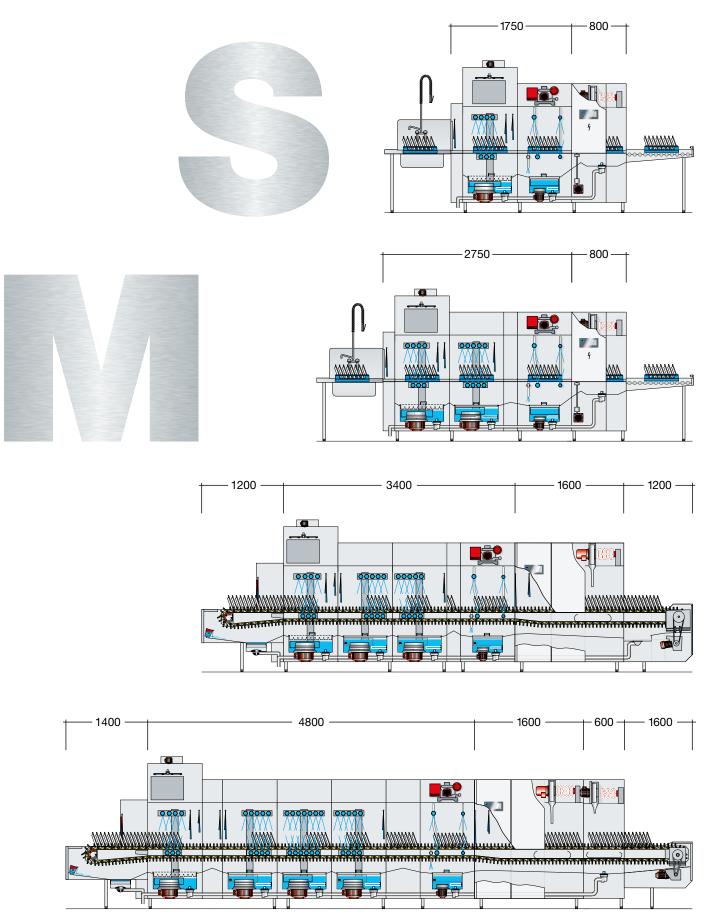






*depends on machine capacity





M-iQ technical data

Available formats and sizes

M-iQ flight type machines Passing height: 465 mm	Passing width	Plate capacity with 2 minutes contact time	Conveyor speed (1) for 2 minutes contact time	
	mm	plates/h	m/min	
B-S54 P6	570	1,730	0.78	
B-S74	750	2,600	0.76	
B-S54	570	1,960	0.88	
B-S74	750	2,930	0.00	
B-M54 V6 P6	570	2,400	1.08	
B-M74	750	3,600	1.00	
B-M54 V8 P6	570	2,620	1.18	
B-M74 V8 P6	750	3,930	1.10	
B-M54 V6 N02 P6	570	2,620	1.18	
B-M74		3,930	1.10	
B-M54 VO NO 4 PG	570	3,070	1.00	
B-M74 V8 N04 P6	750	4,600	1.38	
B-M54	570	3,510	1.50	
B-M74 V8 N44 P6	750	5,270	1.58	
B-L54 VO NO 4 PG	570	3,960	1.70	
B-L74 V8 N04 P6	750	5,930	1.78	
B-L54 VO NA 4 PO	570	4,400	1.00	
B-L74 V8 N44 P6	750	6,600	1.98	
B-L54	570	4,820	0.10	
B-L74 V8 N66 P6	750	7,230	2.18	
B-XL54	570	5,290	0.00	
B-XL74 V8 N44 P6	750	7,930	2.38	
B-XL54	570	5,730	0.50	
B-XL74 V8 N66 P6	750	8,600	2.58	

M-iQ rack type dishwashing machines

Passing height: 465 mm
Passing width: 570 mm
Rack size: 500 x 500 mm

Rack capacity with 2 minutes contact time

Conveyor speed (1) for 2 minutes contact time

	racks/h	m/min	
P6	95	0.78	
N02 P6	105	0.88	
N04 P6	120	0.98	
V6 P6	130	1.08	
V8 P6	140	1.18	
V8 N02 P6	155	1.28	
V8 N04 P6	165	1.38	
V8 N33 P6	180	1.48	
V8 N44 P6	190	1.58	
V8 N46 P6	200	1.68	
V8 N04 P6	215	1.78	
V8 N33 P6	225	1.88	
	N02 P6 N04 P6 V6 P6 V8 P6 V8 N02 P6 V8 N04 P6 V8 N33 P6 V8 N44 P6 V8 N46 P6 V8 N04 P6	P6 95 N02 P6 105 N04 P6 120 V6 P6 130 V8 P6 140 V8 N02 P6 155 V8 N04 P6 165 V8 N33 P6 180 V8 N44 P6 190 V8 N46 P6 200 V8 N04 P6 215	P6 95 0.78 N02 P6 105 0.88 N04 P6 120 0.98 V6 P6 130 1.08 V8 P6 140 1.18 V8 N02 P6 155 1.28 V8 N04 P6 165 1.38 V8 N33 P6 180 1.48 V8 N44 P6 190 1.58 V8 N46 P6 200 1.68 V8 N04 P6 215 1.78

⁽¹⁾ The additional two conveyor speeds can be individually tailored on site to match the degree of soiling, drying time, washware type, etc. (within a range of DIN -10% to DIN +35%).

⁽²⁾ This is an average value for the warewashing process based on a sample place setting and operating mode. Data for specific installations should be derived from economic calculations for each specific project.



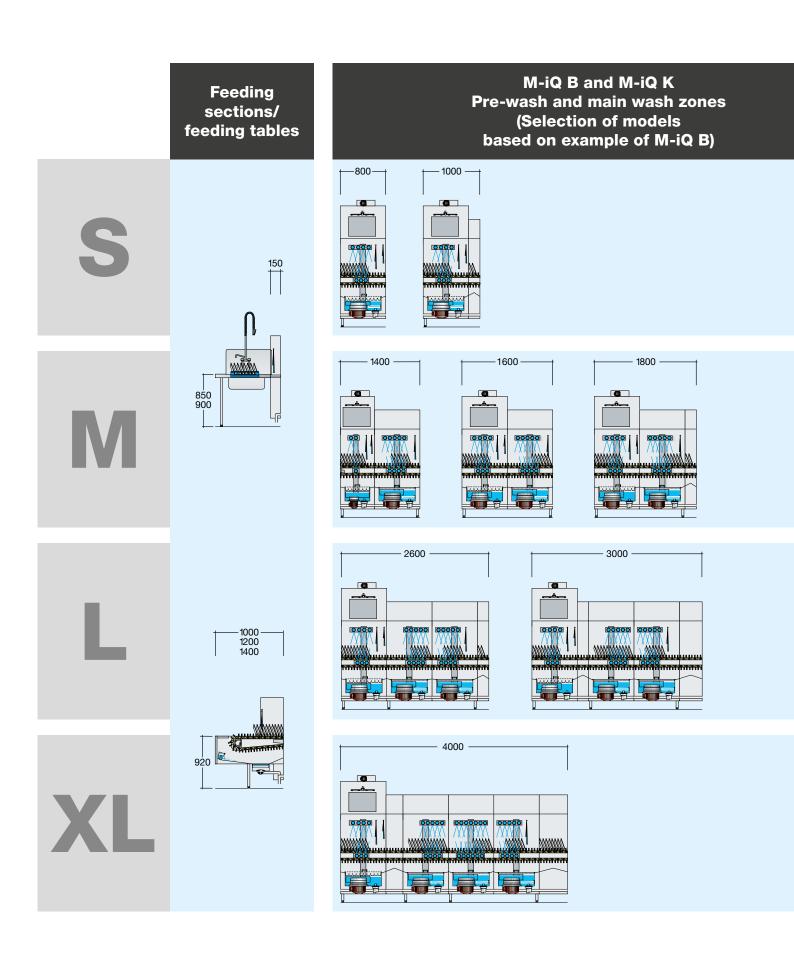
Quantity of rinse water		Total connected electrical load (incl. drying)	Power consumption (2) (incl. drying)	Exhaust air flow rate ⁽³⁾	Total machine length (incl. feeding section, drying zone and discharge section)		
M-iQ	with GreenEye-Technology®						
full load I/h	full load	with gap optimi- sation up to	kW	kW	m³/h	mm	
165	_	_	33.1	25.0	- 110	4,700	
215	_	_	38.8	33.0	110	4,700	
175	_	_	33.1	25.0	- 110	4.000	
230		_	38.8	33.0	110	4,900	
165	-10%	-50%	33.9	23.5	150	5,300	
210	-10%	-50%	39.6	32.0	100		
165	-10%	-50%	35.4	23.5	150	5,500	
215	-10%	-50%	41.1	32.0	100		
165	-10%	-50%	33.9	23.5	150	5,500	
215	-10%	-50%	39.6	32.0	100		
165	-10%	-50%	35.4	24.7	- 150	5,900	
215	-10%	-50%	41.1	32.0	100		
165	-10%	-50%	35.4	26.3	150	6,700	
215	-10%	-50%	41.9	32.0	100	0,700	
175	-10%	-50%	41.1	27.9	170	7,400	
230	-10%	-50%	46.6	32.0	170		
180	-10%	-50%	41.2	29.5	170	7,800	
240	-10%	-50%	46.6	33.7	170		
190	-10%	-50%	44.7	33.4	170	8,700	
250	-10%	-50%	50.1	38.3	170	0,100	
200	-10%	-50%	53.5	35.3	190	9,600	
260	-10%	-50%	62.4	40.3	130		
200	-10%	-50%	53.5	36.5	- 190	10,000	
265	-10%	-50%	62.3	42.3	190		

Quantity of rinse water		Total connected electrical load (incl. drying)	Power consumption (2) (incl. drying)	Exhaust air flow rate ⁽³⁾	Machine length (incl. feeding section tunnel) excluding drying zone and discharge section tunnel with control cabinet	Machine length (incl. feeding section tunnel and drying zone)
M-iQ	with Green- Eye-Technol- ogy®					
full load I/h	full load	kW	kW	m³/h	mm	mm
165	_	32.9	25.0	110	1,550	2,350
175	_	33.0	25.0	110	1,750	2,550
175	_	33.0	25.0	110	1,950	2,750
165	-10%	33.8	23.5	150	2,150	2,950
165	-10%	35.3	23.5	150	2,350	3,150
165	-10%	35.3	23.9	150	2,550	3,350
165	-10%	35.3	24.7	150	2,750	3,350
165	-10%	35.3	25.5	150	2,950	3,750
165	-10%	35.3	26.3	150	3,150	3,950
170	-10%	35.3	27.1	150	3,350	4,150
175	-10%	41.0	27.9	170	3,550	4,850
180	-10%	41.0	28.7	170	3,750	5,050

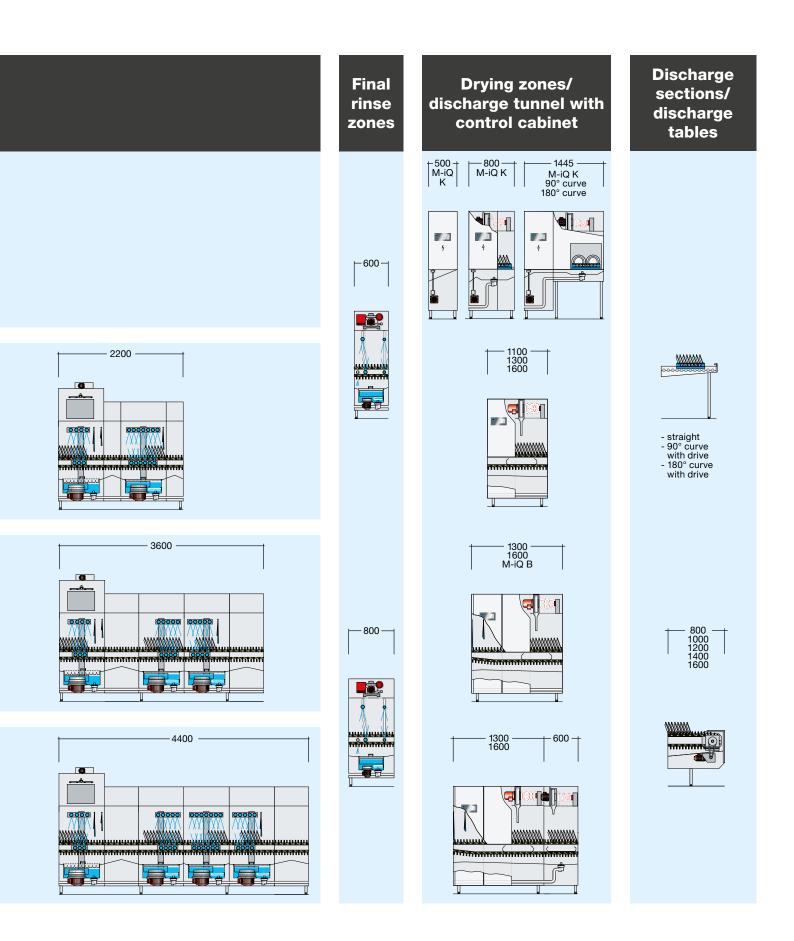
⁽³⁾ The exhaust air temperature depends on the fresh water supply temperature. A water supply temperature of max. 12 °C will produce exhaust air conditions of approx. 20 °C (or approx. 22 °C with the S model) at 90% relative humidity. A direct machine exhaust air connection is no longer needed to meet the requirements of VDI 2052.

M-iQ modules/component parts

Available formats and sizes











For sustainable hygiene and impressive washing results, MEIKO recommends cleaning and hygiene products made by **MEIKO** ACTIVE.

The machine meets the hygiene requirements of EN 17735.