

Professional warewashing, cleaning and disinfection technology



NEW TopLine M2



MEIKO TopLine M2



MEIKO TopLine 10 M2



MEIKO TopLine 10 A M2



MEIKO TopLine 20 M2



MEIKO TopLine 20 A M2



MEIKO TopLine 30 WC M2



MEIKO TopLine 30 M2



MEIKO TopLine 40 M2



MEIKO TopLine 40 B M2

MEIKO TopLine M2



MEIKO TopLine M2 SAN 14



MEIKO TopLine M2 SAN 14 B



MEIKO TopLine M2 SAN 19 B



MEIKO TopLine M2 SAN 20 BW



MEIKO TopLine M2 SAN 20 W



MEIKO TopLine M2 SAN 24 W



MEIKO TopLine M2 SAN 29 BW

MEIKO Experience & Success



1950

The growing company MEIKO launches the first KOTEX KD appliances on the market



1960

With the launch of the KD 60 series, MEIKO has succeeded in developing a new technology for the mechanical cleaning of bedpans and urinals



1980

Mechanical appliances become automatic cleaning and disinfection systems. Thermal disinfection sets new standards for the hygienic processing of care utensils



2025

Launch of the MEIKO TopLine M2. State-of-the-art technology in design, functionality, hygiene safety and user convenience.

Once in a generation innovation



- 1. Improve Nurses' Efficiency and Morale**
- 2. Reduces Dangerous Pathogens like C.diff**
- 3. Sustainability Windfall**



Major Article

Washer disinfectant and alkaline detergent efficacy against *C. diff* plastic bedpans

Savannah Hatt MPH^a, Bryan Schindler PhD^b, Diana Bach BS^c, Christine Greene PhD^d

The automated bedpan WD system was further evaluated with their ability to thermally inactivate or decontaminate the *E. coli* and *C. difficile* cultures (Table 2). The thermal capacity of the WD was found to be capable of causing a greater than 7.23 and 4.31 logarithmic reduction, respectively. Both reductions in culturable bacteria were statistically significant ($P < .001$ *E. coli* and $P = .001$ *C. difficile*).

	Control (Log ₁₀ CFU/mL)	Test (Log ₁₀ CFU/mL)	Average log reduction
<i>E. coli</i>	8.23	<1.0	>7.23
<i>C. difficile</i>	8.54	4.23	4.31

MEIKO Machines = 3.99 log reduction of C.diff = ~99.95%



Cost of hospital management of Clostridium difficile infection in United States—a meta-analysis and modelling study

Shanshan Zhang^{1 2}, Sarah Palazuelos-Munoz³, Evelyn M Balsells⁴, Harish Nair⁴, Ayman Chit^{5 6}, Moe H Kyaw⁵

Affiliations + expand

PMID: 27562241 PMID: PMC5000548 DOI: 10.1186/s12879-016-1786-6

Abstract

Background: Clostridium difficile infection (CDI) is the leading cause of infectious nosocomial diarrhoea but the economic costs of CDI on healthcare systems in the US remain uncertain.

Methods: We conducted a systematic search for published studies investigating the direct medical cost associated with CDI hospital management in the past 10 years (2005-2015) and included 42 studies to the final data analysis to estimate the financial impact of CDI in the US. We also conducted a meta-analysis of all costs using Monte Carlo simulation.

Results: The average cost for CDI case management and average CDI-attributable costs per case were \$42,316 (90 % CI: \$39,886, \$44,765) and \$21,448 (90 % CI: \$21,152, \$21,744) in 2015 US dollars.

Hospital-onset CDI-attributable cost per case was \$34,157 (90 % CI: \$33,134, \$35,180), which was 1.5 times the cost of community-onset CDI (\$20,095 [90 % CI: \$4991, \$35,204]). The average and incremental length of stay (LOS) for CDI inpatient treatment were 11.1 (90 % CI: 8.7-13.6) and 9.7 (90 % CI: 9.6-9.8) days respectively. Total annual CDI-attributable cost in the US is estimated US\$6.3 (Range: \$1.9-\$7.0) billion. Total annual CDI hospital management required nearly 2.4 million days of inpatient stay

If TopLine M2 could eliminate 1 incident of C.diff in 15 years, it would be a WISE INVESTMENT and likely less than a year payback! M2 costs significantly LESS than 1 incident of C.diff.

Average CDI costs was \$34k to 42k per incident!

Source: <https://pubmed.ncbi.nlm.nih.gov/27562241/>

MEIKO VS Competition for Handling Bedpans + Utensils



MEIKO- Automated Cleaning & Disinfection Machines



Manually Cleaning



Macerators



Medical Waste- Throw Away



Manual Cleaning of Bodily Fluids

Takes Time, Doesn't Work Well, and Nurses Dread It



\$88,000/yr for ICU Nurse divided by 52 weeks, divided by 40 hours= \$42/hr or \$.71/minute
Taking utensils to a dirty utility room= ~5 Minutes= ~\$3.55 each time
Plus, manual cleaning can leave behind dangerous pathogens

Macerators: Paper Disposal with Hidden Costs

Plumbing Issues, Storage Headaches,



How do you clean plastic support?

Storage



How do you see measurement for liquid?

Potential Plumbing Clogs- + New Rules/Bans on Solid Waste

Disposing of Bodily Fluids and PVC as Hazardous Waste

High Costs and Wasted Time



Costs \$2-\$20 per pound



How do you see measurement for liquid?

46 Beds = ~100,000 Disposables Thrown Away Yearly

Costing More Than \$402,896 Annually



6 Utensils thrown out per day in ICU

Conservatively, \$1 each

46 Rooms X \$6/day X 365days = **\$100,740**

Plus, costs for Medical Waste at \$2-\$20/pound.

\$3 X 6 pieces/day x 365 days x 46 rooms=

\$302,220

Total Cost of Medical Waste for 46 bed ICU

Annually= **~\$402,896**

MEIKO Meets US Standards

FDA + ISO + CSA

Additional national regulations

FDA – Food & Drug Administration, US

- Registration

The screenshot shows the FDA's public database for Establishment Registration & Device Listing. The page header includes the FDA logo, navigation tabs for various product categories, and a search bar. The main content area displays details for a specific device listing, including the proprietary name, classification, product code, device class, regulation number, medical specialty, registered establishment name, registered establishment number, owner/operator name, owner/operator number, and establishment operations. A blue arrow points from the text 'FDA Registration for M2 3/03/2025' to the 'Page Last Updated' field.

U.S. FOOD & DRUG ADMINISTRATION

Home | Food | Drugs | Medical Devices | Radiation-Emitting Products | Vaccines, Blood & Biologics | Animal & Veterinary | Cosmetics | Tobacco Products

Establishment Registration & Device Listing

FDA Home | Medical Devices | Databases

New Search | [Back To Search Results](#)

Proprietary Name:	MEIKO TopLine 10 Type M2; MEIKO TopLine 20 Type M2; MEIKO TopLine 30 Type M2; MEIKO TopLine 40 Type M2; MEIKO:TOPLINE 10; TOPLINE 20; TOPLINE 30; TOPLINE 40
Classification Name:	WASHER OF BODY WASTE RECEPTACLES
Product Code:	FLH
Device Class:	1
Regulation Number:	880.6800
Medical Specialty:	General Hospital
Registered Establishment Name:	MEIKO MASCHINENBAU GMBH & CO. KG
Registered Establishment Number:	3006542588
Owner/Operator:	MEIKO Maschinenbau GmbH & Co. KG
Owner/Operator Number:	9102540
Establishment Operations:	Manufacturer

Page Last Updated: 03/03/2025
Note: If you need help accessing information in different file formats, see [Instructions for Downloading Viewers and Players](#).
Language Assistance Available: Español | 繁體中文 | Tiếng Việt | 한국어 | Tagalog | Русский | العربية | Kreyòl Ayisyen | Français | Polski | Português | Italiano | Deutsch | 日本語 | فارسی | English

FDA Registration for M2
3/03/2025

EN ISO 15883 - Standard for washer disinfectors

DocuSign Envelope ID: 925C3FB4-D09C-428C-8D4B-42F073A05A5C

EN ISO 15883 part 1 and 3 for bedpan washers:

- **Part 1:** General requirements, terms and definitions, and tests
- **Part 2:** Requirements and tests for washer-disinfectors employing thermal disinfection for surgical instruments, anaesthetic equipment, bowls, dishes, receivers, utensils, glassware, etc.
- **Part 3:** Requirements and tests for washer-disinfectors employing thermal disinfection for human waste containers.
- **Part 4:** Requirements and tests for washer-disinfectors employing chemical disinfection for thermolabile endoscopes.
- **Part 5:** Test soils and methods for demonstrating cleaning efficacy of washer-disinfectors



Additional National Regulations

CSA – Electrical registration for Canada and US



CERTIFICATE

Certificate Number CER200756



Certificate Holder	MEIKO Maschinenbau GmbH & Co. KG Englerstrasse 3 77652 Offenburg Germany
Certification Number	NA202111469
Project Number	PRJ0054594
Product Description	Cleaning and Disinfection appliance
Product Category	Measurement
Model Number	MEIKO TopLine x, Type M2 (The character "x" can be 10, 20, 30 or 40)
Ratings	For models MEIKO TopLine x, Type M2 with option heater (NDV): 11.4/12.5A, 2.2/2.8kW, 208/230V, 60Hz, class I, alternative 13.2A, 3.0kW, 240V, 60Hz, class I, alternative 14.0/14.9A, 3.9/4.6kW, 3~ 208/230V, 60Hz, class I, alternative 11.4A, 4.4kW, 3~ 240V, 60Hz, class I For models MEIKO TopLine x, Type M2 without option heater (NDD): 5.1A, 0.8kW, 208/230V, 60Hz, class I, alternative 5.1A, 0.8kW, 240V, 60Hz, class I
Standards	CSA C22.2 61010-2-040:21 CSA C22.2 No. 61010-1-12 UPD1: Jul 2015, UPD 2: APR 2016, UPD 3: Jun 2023 and AMD 1:2018 UL 61010-1 3rd Edition: 2023
Additional Information	
Validity	This certificate documents conformity with the standards shown. Certification of the product will be indicated by the use of the following certification mark on the product. The certificate is valid while listed on Nemko's certification directory. See www.nemko.com





Simon Huang
Certification department



Nemko North America, Inc.
nr@nemko.com

Signature

Date of Issue

2024-08-22

Working for a more sustainable future
Please do not print

Page 1 of 1



Certificate of Compliance

Certificate:	70013283	Master Contract:	231691
Project:	70174781	Date Issued:	2018-03-12

Issued to: **Meiko Maschinenbau GmbH**
Englerstrasse 3
Offenburg, 77652
GERMANY
Attention: Ingo Wiegand

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Issued by: *Sebastian Schneider*
Sebastian Schneider

PRODUCTS
CLASS - 8721 05 - ELECTRICAL LABORATORY EQUIPMENT
CLASS - 8721 85 - ELECTRICAL LABORATORY EQUIPMENT --Certified to US Standards

Meiko cleaner and disinfecter:
Models MEIKO TopLine 10 . . MEIKO TopLine 20 . . MEIKO TopLine 30 . . MEIKO TopLine 40 . . TopLine 40E . . MEIKO Topic 10 . . MEIKO Topic 20 . . MEIKO Topic 40 . . Topic 40E .
Where last "." identifies option internal heater (NDV) or option for connection to external heater (NDD)

class I, Pollution Degree 2, Installation Category II.

Electrical rating NDV – version
3~, 208 / 230VAC, 60Hz, 3.9 / 4.6kW
3~, 240VAC, 60Hz, 4.5kW
3~, 480VAC, 60Hz, 4.6kW
208 / 230VAC, 60Hz, 2.2 / 2.8kW
240VAC, 60Hz, 3.0kW

Electrical rating NDD – version
3~, 480VAC, 60Hz, 0.8kW
208 / 230VAC, 60Hz, 0.8kW
240VAC, 60Hz, 0.8kW

DQD 507 Rev. 2016-02-18

Page 1

93/42 EEC - Medical Device Regulation (MDR)

MEIKO – „EC Declaration of Conformity“

- Must be included in each manual

Typ / **Model** / Modèle / Modelo / Modelo / Model / Modell

MEIKO TopLine 10
MEIKO TopLine 20
MEIKO TopLine 30

MEIKO TopLine 40
MEIKO TopLine 40E

Benannte Stelle **notified body** / Organisme notifié / Ente nominato / Organismo notificado / bevoegde instantie / Anmält organ

mdc medical device certification GmbH
Kriegerstraße 6 - 70191 Stuttgart – Germany
mdc identification number 0483
MEIKO registration no. D1182200001

Klassifizierung nach RL 93/42/EWG, Anhang IX

Classification according to 93/42/EEC, annex IX
Classification selon 93/42/CEE, annexe IX
Classificazione secondo la direttiva 93/42/CEE, allegato IX
Clasificación según la directiva 93/42/CEE, Anexo IX
Classificatie volgens RL 93/42/EEG, appendix IX
Klassificering enligt direktiv 93/42/EEG, bilaga IX

Ila nach Regel 15
Ila according to rule 15
Ila selon règle 15
Ila secondo regola 15
Ila según regla 15
Ila volgens regel 15

Hiermit bescheinigen wir in alleiniger Verantwortung:

We herewith certify at our sole responsibility / Nous certifions par la présente sous notre seule responsabilité / Con la presente attestiamo è la sola responsabilità / Por la presente certificamos bajo nuestra única responsabilidad / Hiermee verklaren wij in alleen verantwoording / Vi intygar harned på eget ansvar.

dass die oben beschriebenen Produkte den Anforderungen der Richtlinien 93/42/EWG, 2007/47/EG - Verfahren nach Anhang II, Abschnitt 3 (Vollständiges Qualitätssicherungssystem) - entsprechen. Die Produkte werden mit dem CE-Kennzeichen und der Kennnummer 0483 der benannten Stelle versehen.

that the products described above are in compliance with the directives 93/42/EEC, 2007/47/EC - Procedure laid down in Annex II, section 3 (complete quality control system). The products are CE-marked with the notified body no. 0483.



Muster / Example / Exemple / Esempio / Ejemplo / Voorbeeld / Mönster

EG-Konformitätserklärung

2018-05-16 (Update)

EC Declaration of Conformity / Déclaration de conformité CE / Dichiarazione di conformità CE / Declaración de conformidad CE / CE-conformiteitsverklaring / försäkran om överensstämmelse

Firma / Company / Société / Ditta / Empresa / Fabrikant / Företag **MEIKO Maschinenbau GmbH & Co. KG**
Englerstraße 3 - 77652 Offenburg - Germany

Kontakt **Internet: www.meiko.de**
Contact / Contact / Contatto / Contacto / Contact / Kontakt **E-mail: info@meiko.de**
Telefon: +49(0)781/203-0

Auftrag Nr. **Steckbeckenspüler**
Order no. / No. de commande / No. d'ordine / No. de pedido / Opdracht nr. / Ordernr.

Produktspezifikation
Product designation / Désignation du produit / Denominazione del prodotto / Denominación del producto / Productbenaming / Produktspezifikation

Typ / Model / Modèle / Modelo / Modelo / Model / Modell **MEIKO TopLine 10** **MEIKO TopLine 40**
MEIKO TopLine 20 **MEIKO TopLine 40E**
MEIKO TopLine 30

Benannte Stelle notified body / Organisme notifié / Ente nominato / Organismo notificado / bevoegde instantie / Anmält organ **mdo medical device certification GmbH**
Kriegerstraße 6 - 70191 Stuttgart – Germany
mdc identification number 0483
MEIKO registration no. D1182200001

Klassifizierung nach RL 93/42/EWG, Anhang IX
Classification according to 93/42/EEC, annex IX
Classification selon 93/42/CEE, annexe IX
Classificazione secondo la direttiva 93/42/CEE, allegato IX
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Ila nach Regel 15
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Ila secondo regola 15
Ila según regla 15
Ila volgens regel 15

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dass die oben beschriebenen Produkte den Anforderungen der Richtlinien 93/42/EWG, 2007/47/EG - Verfahren nach Anhang II, Abschnitt 3 (Vollständiges Qualitätssicherungssystem) - entsprechen. Die Produkte werden mit dem CE-Kennzeichen und der Kennnummer 0483 der benannten Stelle versehen.
that the products described above are in compliance with the directives 93/42/EEC, 2007/47/EC - Procedure laid down in Annex II, section 3 (complete quality control system). The products are CE-marked with the notified body no. 0483.

die Konformität mit den Bestimmungen folgender weiterer EG-Richtlinien:

2011/65/EU	

Gültig bis / Valid until / Valide jusqu'au / Valido fino al / Valido hasta el / gældig til en med / Gültig t.o.m.

Dokumentationsbevollmächtigter **Viktor Maier**
Responsible for documentation / Responsable de la documentación / Responsabile della documentazione / Responsable de la documentación / Voor deze documentatie verantwoordelijk / Ansvarig for dokumentation
MEIKO Maschinenbau GmbH & Co. KG
Englerstr. 3 - 77652 Offenburg - Germany

Offenburg,
MEIKO Maschinenbau GmbH & Co. KG

ppa.
(per procura)

Dr. Thomas Peukert
Leiter Entwicklung und Konstruktion
Head of Development/Design / Responsable Développement-Construction / Direttore Sviluppo-Costruzione / Jefe de la sección de desarrollo y diseño / Chef Ontwikkeling-Constructie / Chef for utveckling och konstruktion



ISO 9001 – Quality Management System For Companies

Quality system for the design, manufacturing, sales and service of appliances and systems of commercial warewashing, cleaning and disinfection technology including associated services

- TÜV Saar Germany
- Valid for 3 years Extended to February 2028



EN ISO 13485 – QMS For Medical Device Manufacturers

Quality management systems for medical devices manufacturers:

“Design, development, production, installation, sales and servicing of washer-disinfectors”

- MDC - medical device certification Ltd. is the notified body
- Requirements for regulatory purposes, is an internationally agreed standard that sets out the requirements for a quality management system specific to the medical devices industry.
- Valid for 3 years- Valid until February 19th, 2028



For electronic distribution only
Nur zur elektronischen Verbreitung

Certificate

We hereby certify the company

MEIKO Maschinenbau GmbH & Co. KG
Englerstraße 3
77652 Offenburg
Germany

the introduction and application of a

Quality management system according to EN ISO 13485

in the scope

Design and development, manufacturing, installation, distribution and servicing of devices for washer-disinfectors for human waste containers

An audit by mdc has proven that this quality management system meets the requirements of the following standard:

EN ISO 13485:2016 + AC:2018 + A11:2021 - ISO 13485:2016
Medical devices – Quality management systems – Requirements for regulatory purposes

Valid from	2025-02-18	Registration No.	D1182200010
Valid until	2028-02-17	Report No.	P24-01166-309561

Stuttgart, 2024-12-06



Certification Body



Deutsche
Akkreditierungsstelle
D ZM 35002 05-00

IEC 61010-1 / IEC 61010-040

Safety requirements for electrical equipment for measurement, control and laboratory use (cleaning and disinfection appliances)

- 61010-2-045 is replaced by 040
- **60601: BPW do not need IEC 60601 certification. The IEC 60601 refers to medical electrical equipment which are for direct treatment at the patient**

IEC  IEC		Ref. Certif. No. NO87346
IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME / SYSTEME GEI D'ACCEPTATION MUTUELLE DE CERTIFICATS DESSAIS DES EQUIPEMENTS ELECTROLES (IECEE) METHODE OC		
CB TEST CERTIFICATE CERTIFICAT D'ESSAI OC		
Product Produit	Cleaner and disinfectant	
Name and address of the applicant Nom et adresse du demandeur	Meiko Maschinenbau GmbH & Co. KG Englerstrasse 3 77652 Offenburg Germany	
Name and address of the manufacturer Nom et adresse du fabricant	Meiko Maschinenbau GmbH & Co. KG Englerstrasse 3 77652 Offenburg Germany	
Name and address of the factory Nom et adresse de l'usine	Meiko Maschinenbau GmbH & Co. KG Englerstrasse 3 77652 Offenburg Germany	
Note: When more than one factory, please report on page 2 Note: Lorsque il y plus d'une usine, veuillez utiliser la deuxième page	<input type="checkbox"/> Additional information on page 2	
Ratings and principal characteristics Valeurs nominales et caractéristiques principales	3.9/4.6kW 208/230V 3~ 60Hz or 4.5kW 240V 3~ 60Hz or 4.6kW 480V 3~ 60Hz or 2.2/2.8kW 208/230V 60Hz or 3.0kW 240V 60Hz, Cl. I	
Trademark (if any) Marque de fabrique (si elle existe)		
Type of Manufacturer's Testing Laboratories used Type de programme du laboratoire d'essais constructeur	TopLine x NDV	
Model / Type Ref. Ref. De type	The "x" in model name can be "10", "20", "30", "40" or "40E"	
Additional information (if necessary may also be reported on page 2) Les informations complémentaires (si nécessaire, peuvent être indiqués sur la deuxième page)	<input type="checkbox"/> Additional information on page 2	
A sample of the product was tested and found to be in conformity with Un échantillon de ce produit a été essayé et a été considéré conforme à la	IEC 61010-2-040(ed.1) IEC 61010-1(ed.2)	
As shown in the Test Report Ref. No. which forms part of this Certificate Comme indiqué dans le Rapport de tests numéro de référence qui constitue partie de ce Certificat	288616 & -1	
This CB Test Certificate is issued by the National Certification Body Ce Certificat de test OC est établi par l'Organisme National de Certification		
 Gaustadalleen 30 NO-0373 Oslo, Norway		
Date: 06-07-2015	 Signature: Juan Z. Kleppenes Certification Department	
Issued 2007-04 1/1		

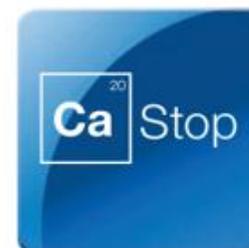
IEC 61326-1 - Electromagnetic compatibility (EMC)

Specifies requirements for immunity and emissions regarding electromagnetic compatibility.
Protection against and from electromagnetic energy.



Nemko GmbH & Co. KG Prüf- und Zertifizierungsstelle Test and Certification Institute Reetzstraße 58 D-76327 Pfalzthal Tel.: +49 (0) 72 40 / 63 -0 Fax: +49 (0) 72 40 / 63 -11			
		Deutsche Akreditierungsstelle D-PL-16175-01-00	EMV Testzentrum
PRÜFBERICHT - TEST REPORT Elektromagnetische Verträglichkeit (EMV) - Electromagnetic Compatibility (EMC)			
ANTRAGSTELLER - APPLICANT			
Firma - Company:	MEIKO Maschinenbau GmbH & C. KG		
Anschrift - Address:	Englerstraße 3 D - 77652 Offenburg		
Anwesende - Witness(es):	-		
PRÜFLING (EUT) - EQUIPMENT UNDER TEST			
Gerätebez. - Equipment:	Reinigungs- und Desinfektionsgerät (Steckbeckenspüler)		
Modell/Typ - Model/Type:	MEIKO TopLine, MEIKO Topic		
Fertigungs Nr. - Serial No.:	10207017		
PRÜFUNG - TEST			
Anlieferung Arrival of EUT:	18.03.2014		
Meßtermin(e) Date of measurement:	18.03.2014; 19.03.2014; 21.03.2014; 10.04.2014; 11.04.2014; 06.05.2014		
Prüfungsgrundlage Standards:	Störaussendung - Emission: EN 61326-1:2013 Klasse B - class B EN 61000-3-2:2006+A1:09+A2:09 EN 61000-3-3:2008	Störfestigkeit - Immunity: EN 61326-1:2013 industrielle Umgebung industrial locations	
Ergebnisse - Results:	Anforderungen erfüllt - Passed Details siehe Zusammenfassung - Details see test result summary		
Bemerkungen - Remarks:	Ersatz für Prüfbericht FS-1402-254555-001 vom 07.05.2014. Replacement for test report FS-1402-254555-001 dated 2014-05-dd.		
Durchführung - Performed by:	Dipl.-Ing. L. Midden		
PRÜFBERICHT - TEST REPORT			
Identifikationsnummer Identification No.:	FS-1402-254555-002		
Datum des Prüfberichts Date of Report:	11.06.2014		
bearbeitet von - Provided by:	Dipl.-Ing. L. Midden Prüfer - Person responsible		Unterschrift - Signature
überprüft von - Approved by:	Dipl.-Ing. P. Lukas Prüfer - Person responsible		Unterschrift - Signature
<small>Dieser Prüfbericht besteht inkl. diesem Deckblatt aus 56 nummerierten Seiten und darf ohne schriftliche Genehmigung des Prüflabors nicht auszugsweise vervielfältigt werden. Die Prüfergebnisse beziehen sich ausschließlich auf den oben aufgeführten Prüfling (Typ-Prüfung). Rechtsgültigkeit besitzt nur das handschriftlich unterschriebene Original. This report consists of 56 numbered pages including this page and shall not be reproduced except in full, without the written approval of the testing laboratory. The results are related to the equipment under test only (type-test) The English version is a translation. In case of doubt you should follow the original German text. Legal validity is given by the handwritten signed document only.</small>			

MEIKO TopLine M2 – Top Innovative Technology





Optimises hygiene and safety with a patented design which ensures that no steam escapes from the system.

Completely
steam-tight system



Maximum operational and hygiene safety thanks to complete system-vapor-tightness

Function:

- **Atmospherically** completely **closed** system
- **Overpressure / condensate** is drained **into the sewer system** via check valves

Your advantages:

- No viruses, bacteria and aerosols escape into the room
 - No additional moisture in the room (risk of mold)



Gets every last spot of your care utensils hygienically clean with a powerful telescopic rotary jet and an optimised wash system that acts on all sides.

Efficient Cleaning With Telescopic Rotary Jet





Efficient Cleaning of Care Utensils, With Extending Rotary Jet

Function:

- Hydraulic, magnetically controlled extension of the **main wash nozzle** directly **into the care utensils**

Your advantage:

- Super wash-off effect, eliminates even C. Diff. (spores) and achieves an effectiveness of virucidal decontamination and disinfection of care utensils.
For both an expert opinion is available.

TopLine – C.Diff.

PROF. DR. MED. H. - P. WERNER
FACHARZT FÜR HYGIENE

HygCen - Centrum für Hygiene und
medizinische Produktsicherheit GmbH
Bonnhövedstraße 78
D-19055 Schwelin
Tel.: +49 (0)385 / 56 82 85
Fax: +49 (0)385 / 56 82 87
E-Mail: hpwerner@hygocen.de

Prof. Dr. H.-P. Werner - via HygCen GmbH - Bonnhoewedstr. 78 - D-19055 Schwelin

MEIKO
Maschinenbau GmbH & Co. KG
Englerstraße 3
D- 77652 Offenburg

11/09/2008

Expert Opinion

After the test of the washer-disinfector, MEIKO TopLine 20 (bedpan washer) manufactured by Meiko Maschinenbau GmbH & Co. KG, performed by HygCen GmbH, my expert opinion of the device is as follows:

As is evident from test report SN 8009 dated 01/07/2008 and SN 8009a dated 21/07/2008 the bedpan washer was tested in regard of the disinfection efficiency.

As testsoil RAMS suspension (Bovine serumalbumin – mucin – maize starch) respectively dirty conditions (3g albumine/l; 3ml erythrocytes/l) were applied. The initial number of germs was 10^5 cfU /ml. After the exposure of the testspecimen no grow of spores could be determined quantitative. Aside from the germ carriers, temperature data loggers of ebro Electronic GmbH & Co KG (Ingolstadt, Germany) were used which allowed the A_0 value to be calculated and a correlation between the A_0 value calculated based on the temperature and the microbiological efficacy to be established.

This fact is especially significant since the cleaning / disinfection device MEIKO TopLine 20 (bedpan washer) manufactured by Meiko Maschinenbau GmbH & Co. KG also calculates the respective A_0 value based on the actual temperature and resident times of the device. A sufficiently disinfection efficiency adverse spores of *Clostridium difficile* can be confirmed.



Prof. Dr. med. H. – P. Werner

TopLine M2 – fully virucidal effectiveness

PD Dr. rer. nat. Dr. med. habil. Friedrich von Rheinbaben
Virologie, Mikrobiologie, Hygiene

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40589 Monheim am Rhein
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To
Meiko Maschinenbau GmbH & Co. KG
Englerstr. 3
77652 Offenburg
Germany

Monheim, 12th of November 2021

Expert Opinion

Effectiveness of the virucidal decontamination and disinfection of bedpans and urine bottles in the Washer-Disinfector Meiko TopLine 20 type M2 with the reprocessing program 08 intensive (A0 3000)

Summary and evaluation

Based on the experimental investigation documented above, and done with Murine Parvovirus in the Washer-Disinfector Meiko TopLine 20 type M2, a comprehensive decontamination and disinfection effect against human pathogenic viruses in the sense of fully virucidal effectiveness (with a titer reduction of at least 4 lg) can be certified when the processing program 08 intensive (A0 3000) is carried out.

germ carriers made of stainless steel X5CrNi1810 with two fastening ends and a contamination surface of 100mm x 10mm were taken. The germ carriers were soiled in accordance with ISO/TS 15883-5 with a load of bovine serum albumin, mucin, corn starch (RAMS) mixed with Murine Parvovirus. For the investigation, 7 germ carriers per run were attached to the bedpan, the bedpan lid, inside and outside the urine bottle and in the machine chamber. Then three independent test runs were carried out in accordance with the cleaning

Seite 1

Virucidal =
inactivation of viruses

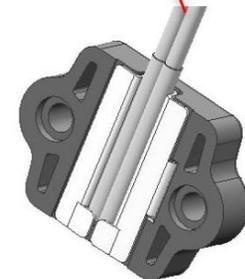


Thermo Control

Takes reliable disinfection to the next level by offering patented control of the freely selectable* A_0 value, carefully monitored by temperature sensors which cross-check each other's readings.

*from 60 to 3000.

Cross-checked Temperature Monitoring





Temperatur Control and Ao-value-control

Function:

- Temperature control using 2 electronically independent sensors
- Temperature sensors placed at the lowest point (=lowest temperature)

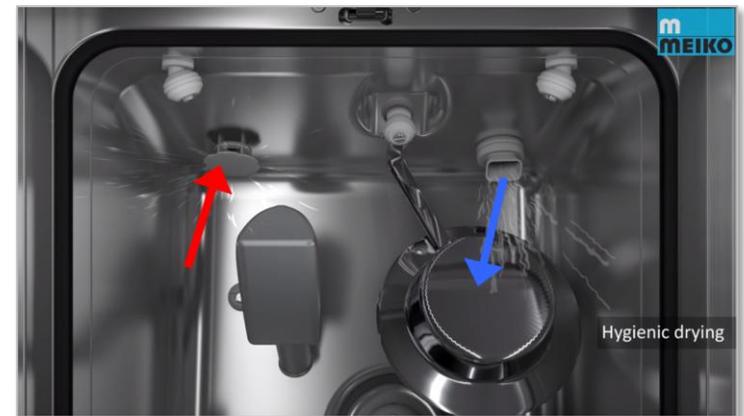
Your advantage:

- Hygienically safe disinfection
- Ideal program runtimes and reliable compliance with the A0 value



Uses filtered air to dry and cool, producing hygienically clean care utensils that are cool to the touch.

Filtered Air Dries and Cools





Germ-free Drying And Recooling Through Filtered Air Using A HEPA-13 Filter

Function:

- Blowing in HEPA 13-filtered air (patent protected)
 - Draining excess air into the sewer system

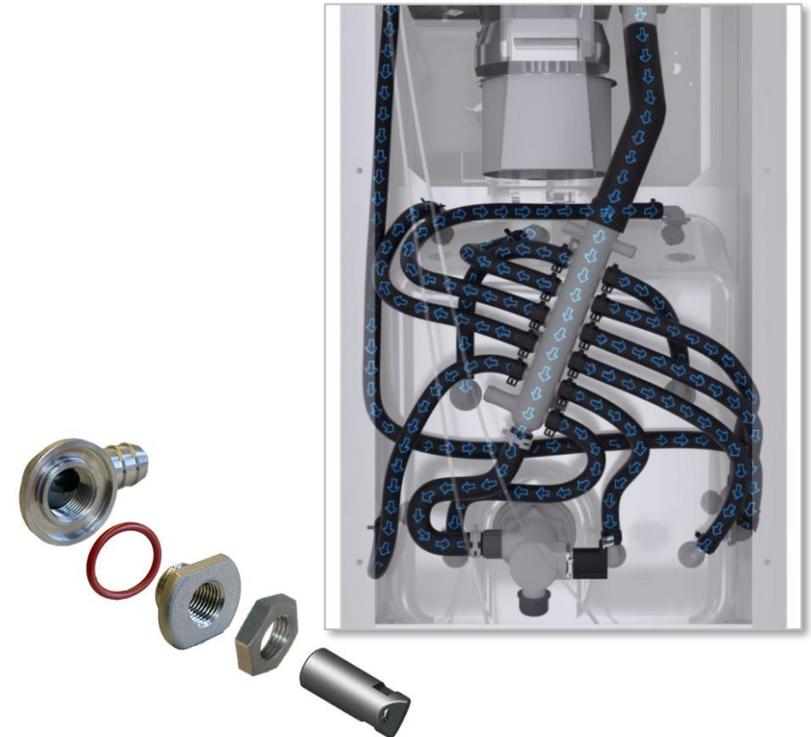
Your advantages:

- High hygiene safety
 - No steam escapes into the room
- Cooled care utensils - high occupational safety



The *Total Auto Disinfection* (T.A.D.) function disinfects all the water pipes in the machine after each completed wash cycle to avoid the risk of re-contamination.

Automatic Disinfection Of All Components In Contact With Water





Total Auto Desinfection

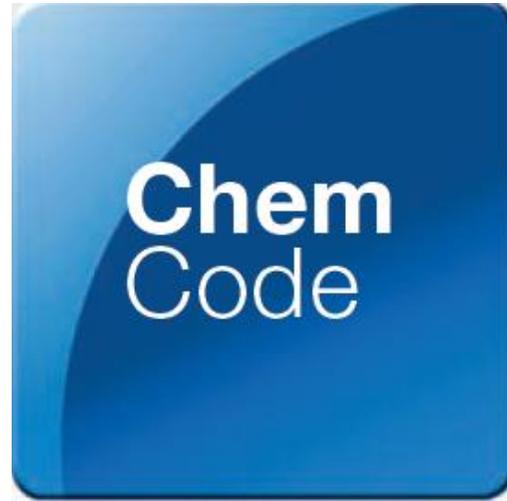
Automatic disinfection of water tank, pipes and nozzles

Function:

- By generating **steam in the tank-unit**, the **tank**, all **pipes** and **nozzles** are automatically **disinfected**

Your advantages:

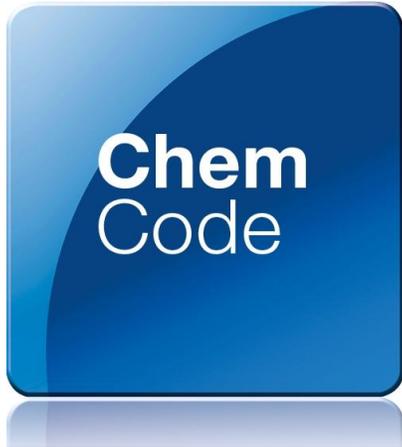
- No system contamination
- High operational safety
- High hygiene safety



Uses a unique suction lance coding system to eliminate the risk of mixing up rinse aid and detergent and to ensure a validated process.

Unique Suction Lance Coding System





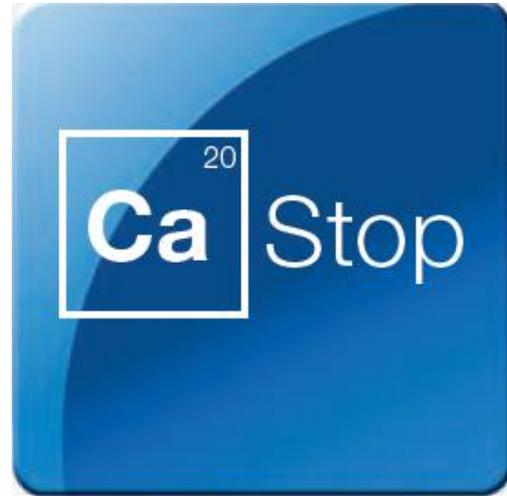
The Suction Lance Coding As Protection Against Mix-up Of Rinse Aid And Detergent

Function:

- Suction lances have **three or four ribs** and therefore only **fit into the container prepared** for them

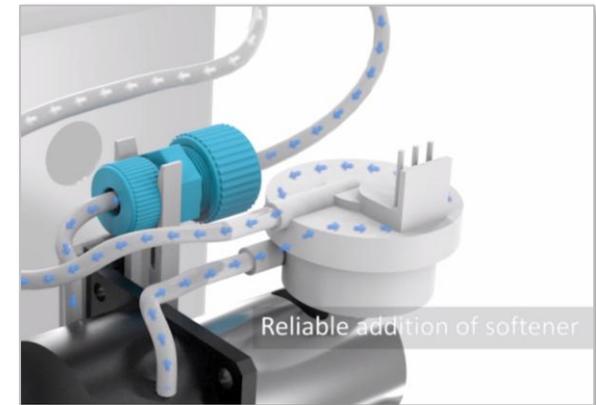
Your advantages:

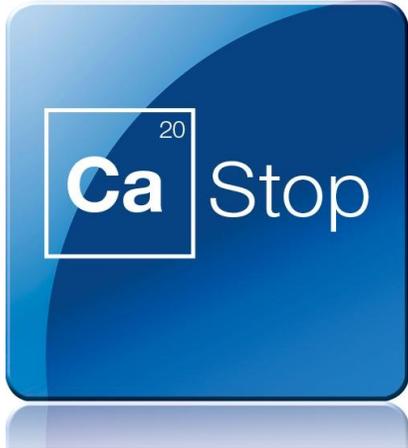
- Mix-up is impossible
- High operational safety
 - Increasing lifespan
 - High hygiene safety



Guarantees high operating reliability by using sensors to monitor dosing of the detergent and of the softener/rinse aid mix.

Sensor-based Monitoring Of Chemical Dosing





Sensor-controlled Dosing Monitoring

Function:

- Checking **flow rate and amount** when dosing the chemicals, **lack of liquid** is indicated by errors

Your advantages:

- Active protection against device calcification
 - Increasing lifespan
- Guaranteed consistent cleaning results

TOP Features of TopLine M2



The optimized **cleaning system** with new wash mechanics and higher pressure
>>> *increases cleaning performance, hygiene and efficiency*



The intuitive **operating concept** with glass panel and signal concept
>>> makes it safer and more effective



The new **load detection**, the smart assistant system
>>> simplifys the work and saves time



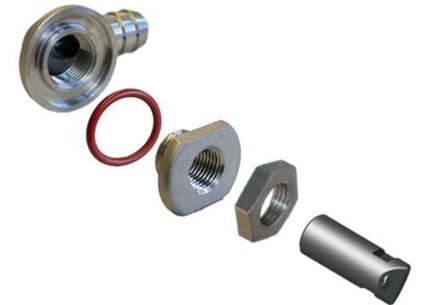
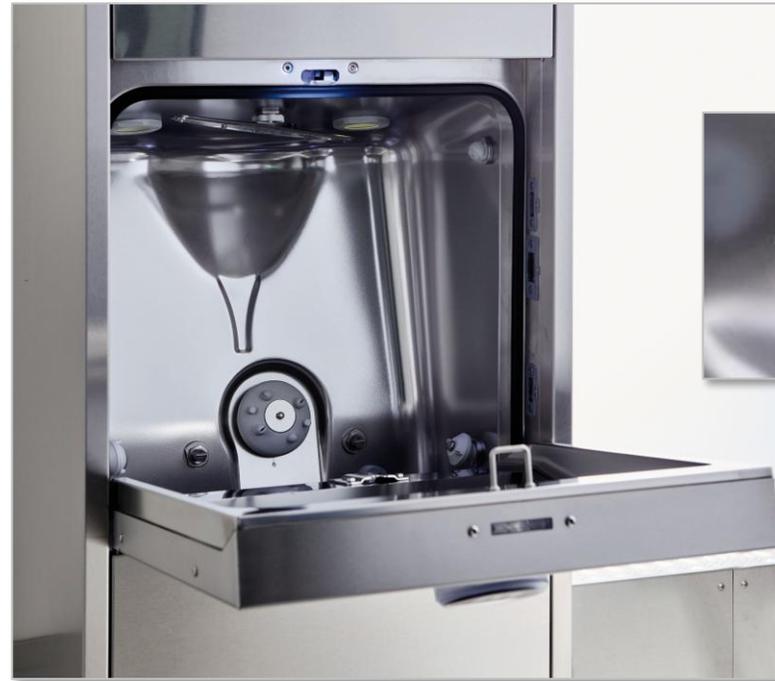
The new **connectivity** of the MEIKO Connect app
>>> simplifies monitoring & validation



Improved **safety** with a selectable A_0 value of up to 12,000
>>> meets current and future requirements



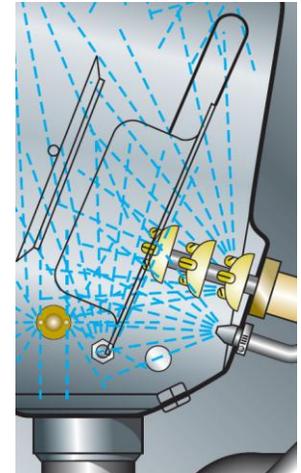
...cleaning system...



- **With new wash chamber, new nozzles and a high water pressure**



...cleaning system...



- **With new designed telescopic rotary jet**



...cleaning system...



- **With an upper washing arm**



...cleaning chamber...



- **With interior lighting (for improved visual inspection)**



...operating concept...

1. Glass operating panel



INTUITIVE:

- **One-touch operation**
- **Self-explanatory icons**
- **Plain text display**



...operating concept...

Example - Information menu

Navigation icons: Home, Hand, Tank, Wash, Detergent

LANGUAGES

Deutsch	
English	
Español	
Français	
Italiano	✓
Nederlands	

Navigation icons: Back, Forward, Home

Navigation icons: Home, Hand, Tank, Wash, Detergent

TANK

Inlet temperature	20.0 °C
Tank level	0 mm
Fill cold water	OFF
Fill hot water	OFF
Wash pump	OFF
Wash pump for SSF	OFF

Navigation icons: Back, Forward, Home

Navigation icons: Home, Hand, Tank, Wash, Detergent

OPERATING TIMES

Loads ID	161
Last maintenance	08.12.20
Next maintenance	18.01.24
Loads to maintenance	4987
Operat. times since	08.12.20
Total operating time	1 h

Navigation icons: Back, Forward, Home

Navigation icons: Home, Hand, Tank, Wash, Detergent

DAILY LOG

18.01.2024

Events

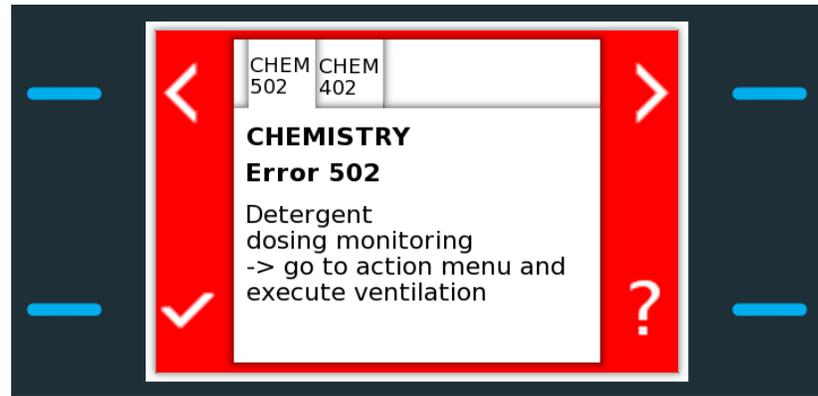
14:50	State change Error
14:55	Message 502 vanished Detergent
14:55	Message 402 vanished Rinse aid/water softener
14:55	State change Machine off

Navigation icons: Back, Forward, Home



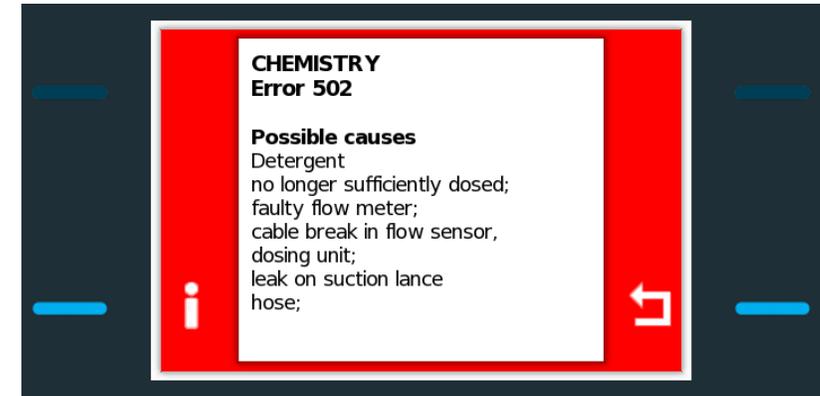
...operating concept... messages

Error messages



>>>

Helptext

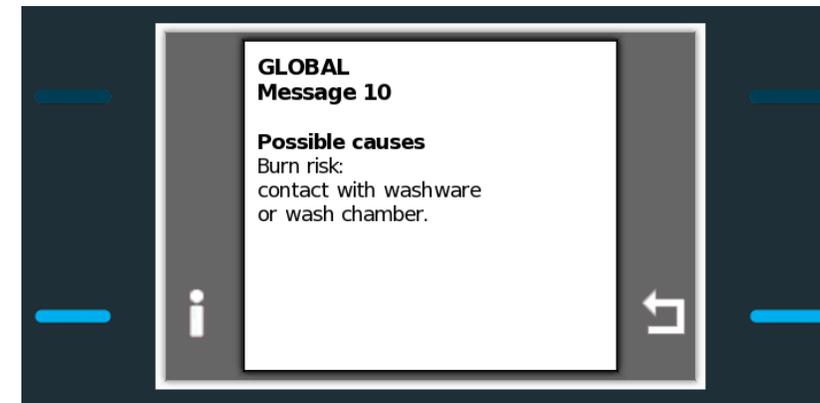


Warning messages



>>>

Helptext





...operating concept...



1. Glass operating panel
2. Blue operating concept



BLUE = ready for operation

- elements and functions lit in blue can be used or selected



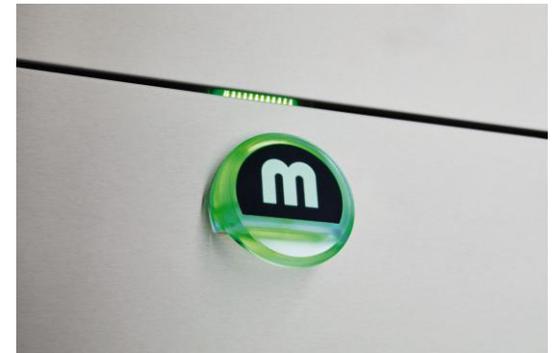
...signal concept...



Blue = Ready for operation



Green = Programme is running



Red = important message





...operating concept...



1. Glass operating panel
2. Blue operating concept
3. **Signal concept**



GREEN = in operation e.g. disinfection

- Intuitive, with colors



...operating concept...



1. Glass operating panel
2. Blue operating concept
3. **Signal concept**



RED = important message

- Intuitive, clear communication guaranteed



...operating concept...

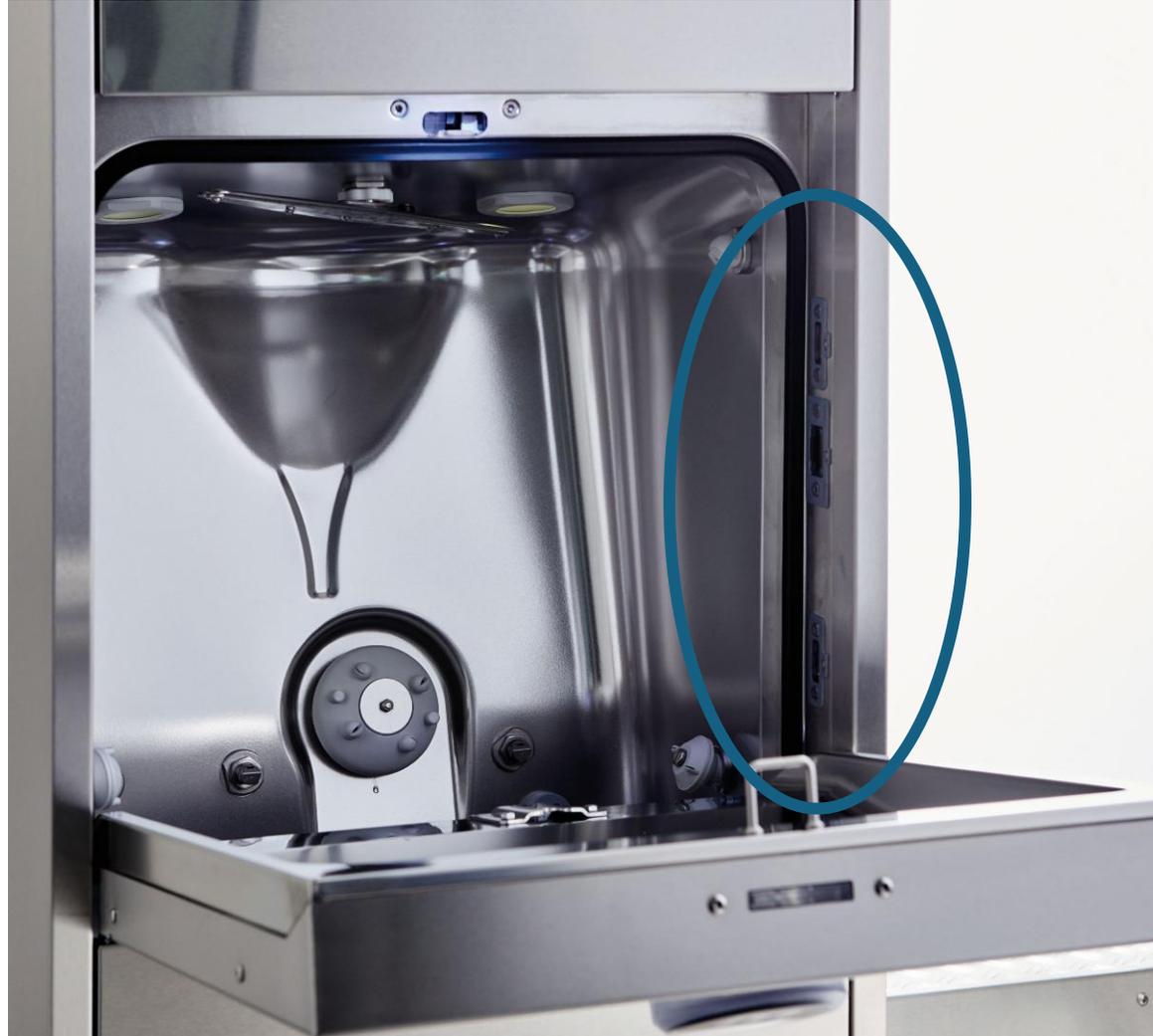


Benefits:

- Easy-to-clean safety glass
- Clearly guides the operator through the menu
- Optimum communication between human and machine
- Saves time because operating status can be seen from a distance



...load detection...



SUH 1.78 (9738699)

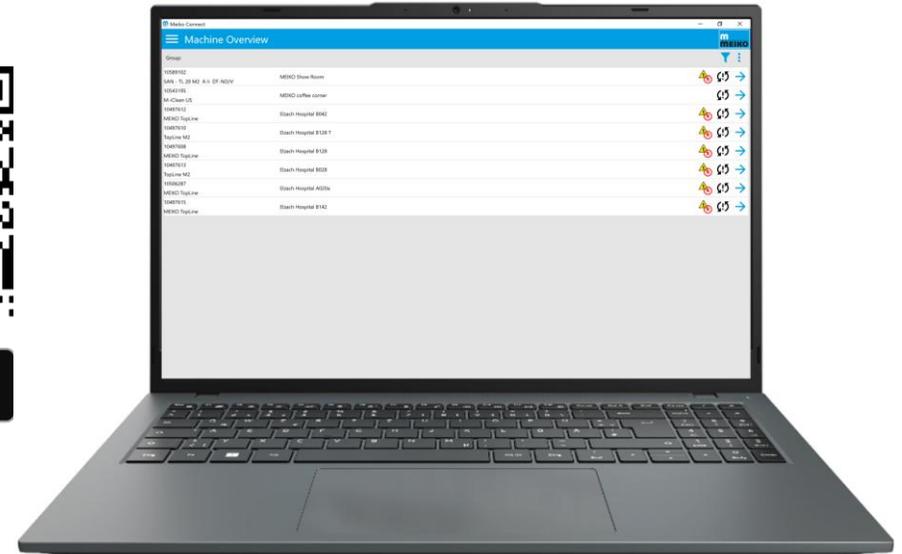




...connectivity...

MEIKO Connect App

- For your laptop, tablet, smartphone (Android)
- Data can be transmitted via Bluetooth (direct communication with the machine)
- Connectivity via LAN or WLAN (optional)





...connectivity...



The **MEIKO Connect App** allows you to view and manage all relevant data from the TopLine M2

Benefits:

- View all process settings, program details, error messages, etc.
- Daily protocol with documented hygiene results
- Stay informed even outside of the sluice room (with connectivity via WLAN or LAN)
- Quick troubleshooting

Mobile Version for Smartphone

Machine overview

Machine Overview		MEIKO	
Group: 			
10589102 MEIKO TopLine	MEIKO show room	  	
10543195 M-iClean US	MEIKO coffee corner	 	
10497612 MEIKO TopLine	Elzach B042	 	
10497610 TopLine M2	Elzach B128	 	
10497608 MEIKO TopLine	Elzach B228	 	
10497613 TopLine M2	Elzach B028	 	
10506287 MEIKO TopLine	Elzach A020a	 	
10497615 MEIKO TopLine	Elzach B142	 	

>>>

Daily overview

10497610		MEIKO	
←	Month January Year 2024	⋮	
16.01. Tue	 2h 11min 14 Cycles	 0  0	
15.01. Mon	 2h 39min 17 Cycles	 0  0	
14.01. Sun	 1h 25min 9 Cycles	 0  0	
13.01. Sat	 1h 36min 10 Cycles	 0  0	
12.01. Fri	 2h 2min 13 Cycles	 0  0	
11.01. Thu	 2h 29min 16 Cycles	 0  0	
10.01. Wed	 2h 25min 16 Cycles	 1  0	
09.01. Tue	 2h 41min 17 Cycles	 0  0	
08.01. Mon	 2h 43min 17 Cycles	 0  0	
07.01. Sun	 2h 39min 17 Cycles	 0  0	
06.01. Sat	 2h 9min 15 Cycles	 0  0	
05.01. Fri	 3h 3min 21 Cycles	 0  0	
04.01. Thu	 2h 51min 20 Cycles	 0  0	
03.01. Wed	 2h 42min 17 Cycles	 0  0	
02.01. Tue	 2h 15min 14 Cycles	 3  0	
01.01. Mon	 0h 0min	 0  0	

>>>

Daily report

10497610 - 16.01.24		MEIKO	
▼ Maintenance	Value		
▼ Operating times	Day	Total	
▼ Counter	Day	Total	
▼ Water consumption	Day	Total	
▼ Chemical consumption	Day	Total	
▼ Hygiene settings	Value		
▼ Events[0]			

Mobile Version for Smartphone

Daily Report

10497610 - 16.01.24		
Water consumption		
	Day	Total
Cold water	228l	120m³
Hot water	683l	371m³
Chemical consumption		
	Day	Total
Detergent	176ml	56l
Rinse aid	22ml	13l
Hygiene settings		
	Value	
Disinfection mode	2	
A0 value (global)	600	
Minimum A0 value	60	
Min. temperature A0	70°C	
Events[2]		
00:00	End of programme	
03:46	Ready for operation	
04:29	Operation	
04:29	Programme 26	+
04:29	Set A0 value 600	
04:39	End of programme	
05:29	Ready for operation	
05:29	⚠ Rinse aid/water softener dosing critically low	
05:29	Rinse aid/water softener dosing critically low	
05:30	Operation	
05:30	Programme 26	+
05:30	Set A0 value 600	
05:39	End of programme	
07:46	Ready for operation	
07:46	Operation	

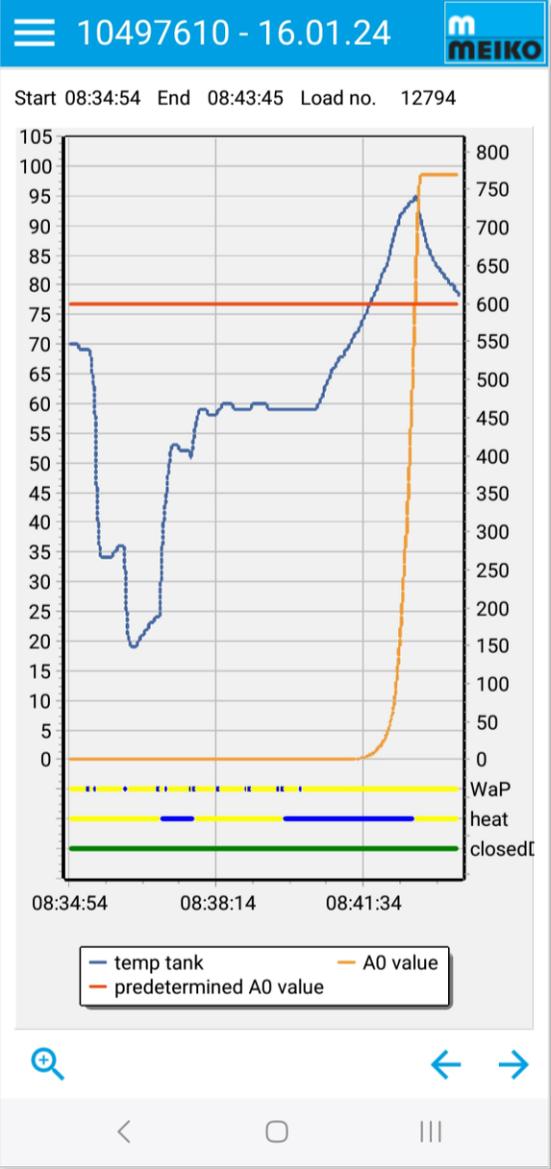
>>>

Daily Report

10497610 - 16.01.24	
08:01	✓ Ready for operation
08:01	🌊 Operation
08:01	Programme 26 +
08:01	Set A0 value 600
08:10	End of programme
08:23	✓ Ready for operation
08:24	🌊 Operation
08:24	Programme 26 +
08:24	Set A0 value 600
08:33	End of programme
08:34	✓ Ready for operation
08:34	🌊 Operation
08:34	Programme 26 +
08:34	Set A0 value 600
08:43	End of programme
08:52	✓ Ready for operation
08:52	🌊 Operation
08:52	Programme 26 +
08:52	Set A0 value 600
09:02	End of programme
10:16	✓ Ready for operation
10:16	🌊 Operation
10:16	Programme 26 +
10:16	Set A0 value 600
10:26	End of programme
10:48	✓ Ready for operation
10:48	🌊 Operation
10:48	Programme 26 +
10:48	Set A0 value 600

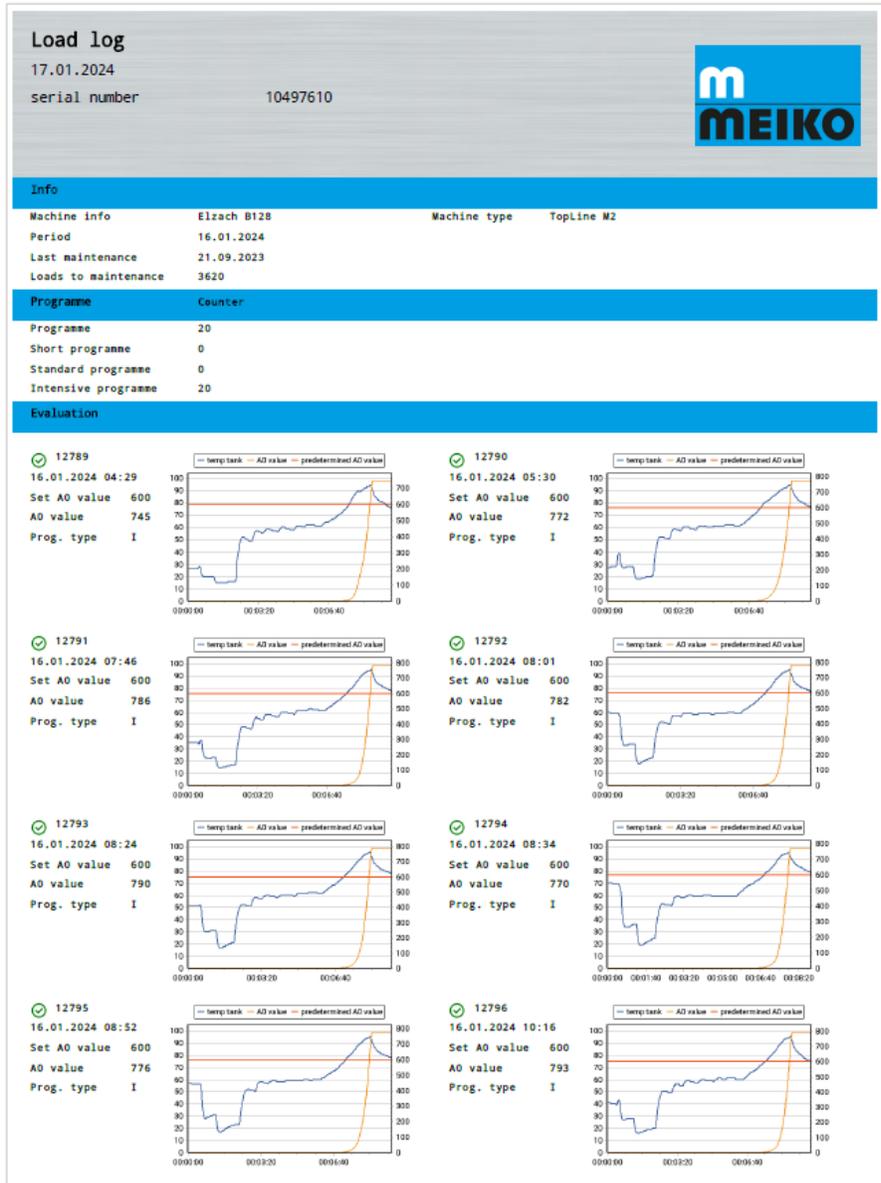
>>>

Program Sequence



Mobile Version for Smartphone

Create PDF to Log / Hygiene Report



Daily Protocol (Settings / Technical)

Daily protocol
16.01.2024
serial number 10497610



Maintenance

Maintenance	Value
Last maintenance	21.09.2023
Next maintenance	5941h
Loads to maintenance	3620

Operating times

	Day	Total
Total time	3h 7min	1681h
Wash pump	0h 12min	76h
Wash pump for SSF	0h 0min	0h
Dose detergent	0h 2min	12h
Dose rinse aid	0h 0min	6h
Heating in LPSG	1h 41min	1004h
Cold water filling valve	0h 19min	148h
Hot water filling valve	1h 1min	396h
Unlock main nozzle	0h 12min	60h
Blower	0h 52min	561h
Open door	0h 1min	18h
Close door	0h 1min	19h
Unlock door	0h 0min	3h
Lock door	0h 0min	3h

Counter

	Day	Total
Total loads	20	1380
Programme position 1	0	40
Programme position 2	0	2
Programme position 3	20	1338
External start 1	0	0
External start 2	0	0
C&O time switch	0	0
SSF time switch	0	0
Ventilate rinse aid	0	4
Ventilate detergent	0	3

Water consumption

	Day	Total
Cold water	324l	120m³
Hot water	979l	371m³

Chemical consumption

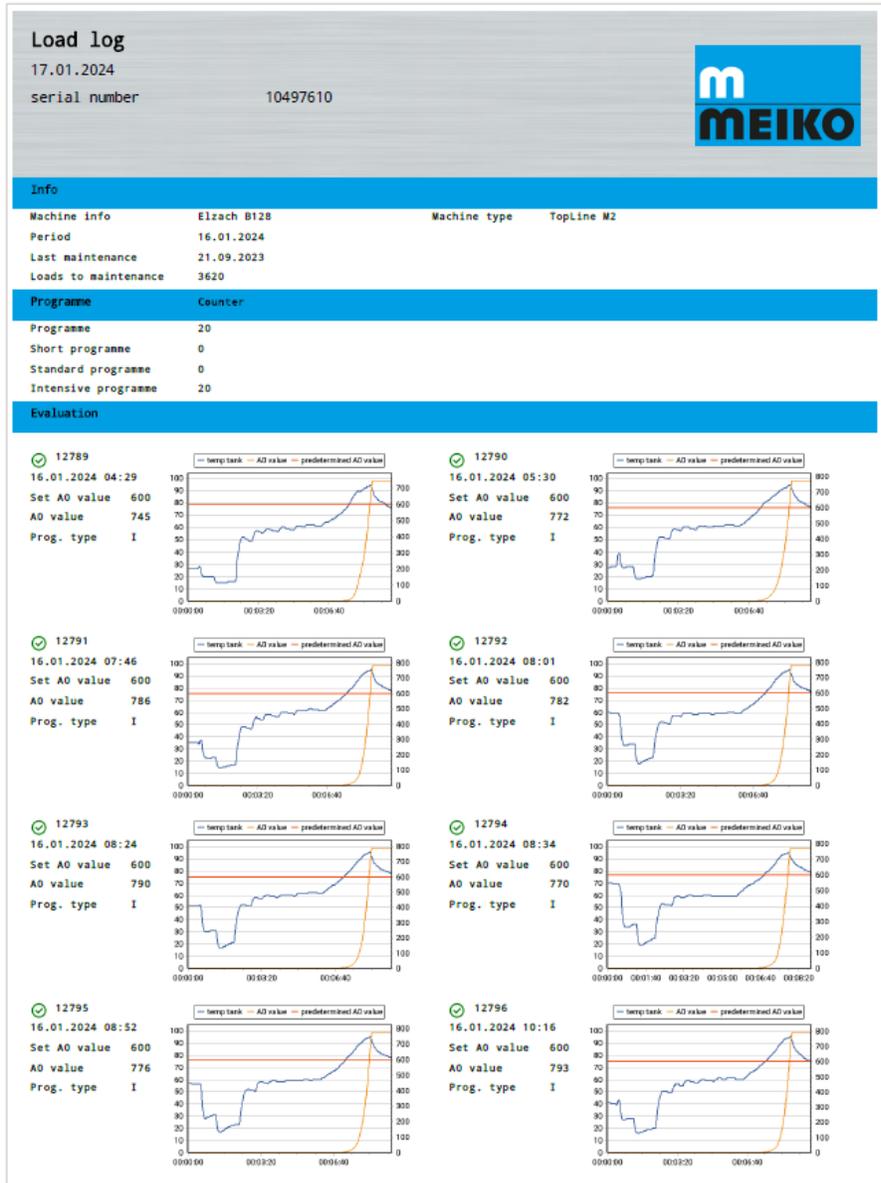
	Day	Total
Detergent	251ml	57l
Rinse aid	32ml	13l

Hygiene settings

	Value	Value	
Disinfection mode	2	Disinfection temperature	85°C
A0 value (global)	600	Disinfection time	75sec
Minimum A0 value	60		
Min. temperature A0	70°C		

Mobile Version for Smartphone

Create PDF to Log / Hygiene Report



Daily Protocol (Settings / Technical)





...connectivity...

PC version (Microsoft)

BlueVision 4

Machine Overview

Machine Overview

- Group1
 - Machine 1 (10497611)
 - Machine 2 (10423979)
 - Machine 3 (10421618)
 - Machine 4 (10477794)
 - Machine 5 (10421616)

Machine 5 (10421616 - TopLine M2)	Machine 4 (10477794 - TopLine M2)	Machine 3 (10421618 - TopLine M2)	Machine 2 (10423979 - TopLine M2)	Machine 1 (10497611 - MEIKO TopLine)

PC version (Microsoft)

Machine Overview

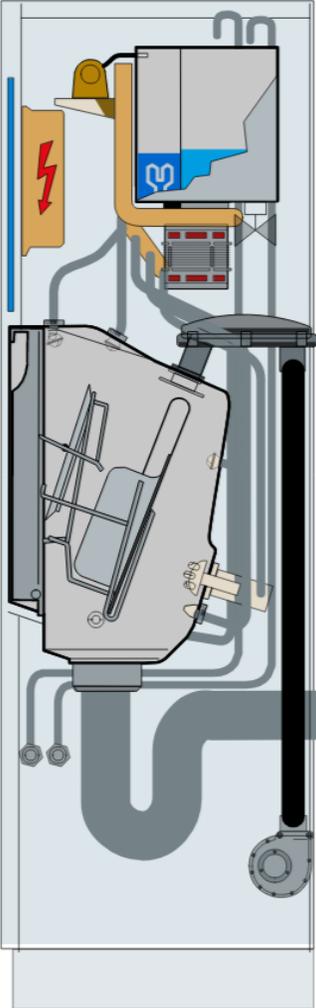
Group1

Machine 1		10497611
Machine 2		10423979
Machine 3		10421618
Machine 4		10477794
Machine 5		10421616

Machine Overview | Daily protocol | Load log

Operation [02.01.2024]

Speed 1x ▶ 02.01.2024 07:09:51



PC version (Microsoft)

Machine Overview

Machine Overview | Daily protocol | Load log | economic management

Operation [03.01.2024]

Speed 1x 03.01.2024 08:06:45

Machine	Status	ID
Machine 1	Warning	10497611
Machine 2	Error	10423979
Machine 3	Warning	10421618
Machine 4	Warning	10477794
Machine 5	Error	10421616

84,5°C

57,5°C

Start

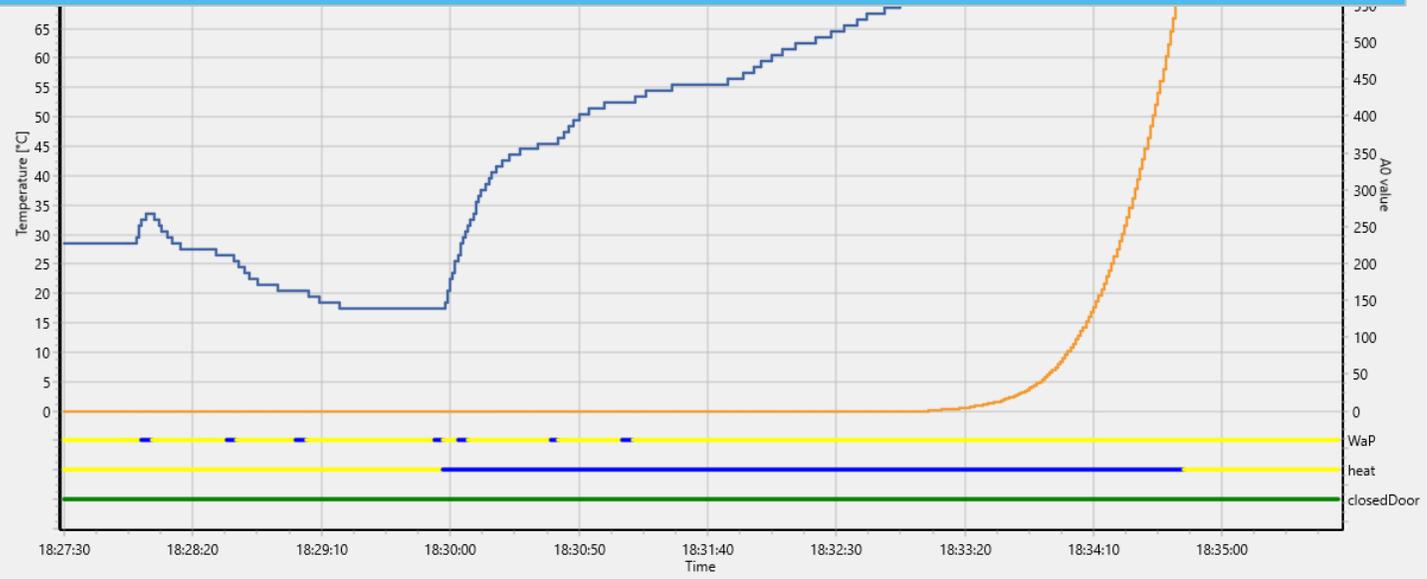
Detailed description: The image shows a software interface for machine monitoring. On the left, a sidebar lists five machines with their respective status icons (warning or error) and unique IDs. The main area displays a 3D cutaway view of a machine's internal components, including a motor, a control unit, and various pipes. Two temperature sensors are indicated with labels: 84,5°C and 57,5°C. The interface includes a top navigation bar with tabs for 'Machine Overview', 'Daily protocol', 'Load log', and 'economic management'. A 'Speed' control is set to '1x' and a timestamp '03.01.2024 08:06:45' is shown. A 'Start' button is visible in the bottom left corner.

PC version (Microsoft)

← 14.01.2024

- Group1
- Machine 1  10497611
 - Machine 2  10423979
 - Machine 3  10421618
 - Machine 4  10477794
 - Machine 5  10421616

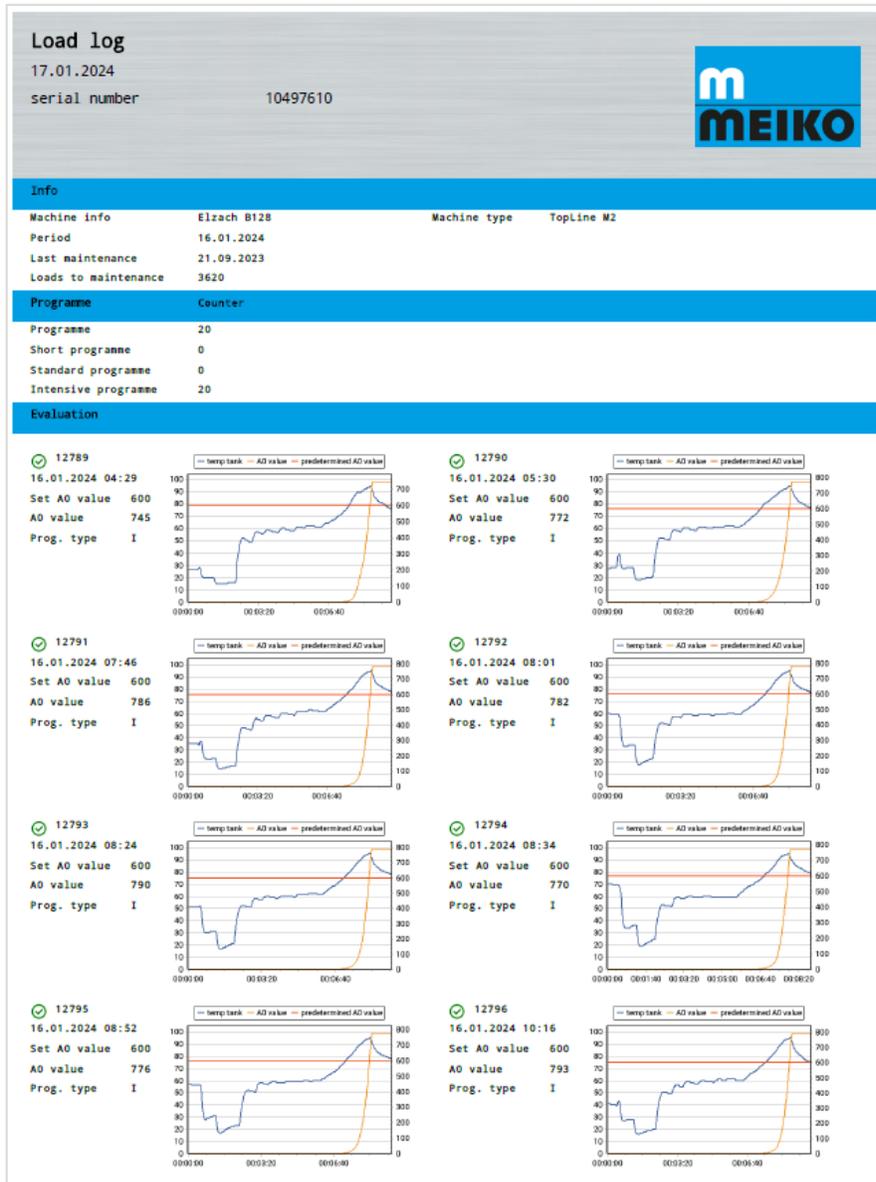
Load no.	Start			Result	Status
14309	18:27	Short programme	A0 value calculation	A0 value : 600 A0 value : 738	✓
14308	17:35	Intensive programme	A0 value calculation	A0 value : 600 A0 value : 751	✓
14307	17:14	Short programme	A0 value calculation	A0 value : 600 A0 value : 734	✓
14306	11:43	Short programme	A0 value calculation	A0 value : 600 A0 value : 757	✓
14305	11:27	Intensive programme	A0 value calculation	A0 value : 600 A0 value : 757	✓
14304	11:05	Short programme	A0 value calculation	A0 value : 600 A0 value : 746	✓
14303	09:18	Intensive programme	A0 value calculation	A0 value : 600 A0 value : 770	✓



— Temperature (°C)
 — A0 value
 — predetermined A0 value

Load log / hygiene report

Daily protocol (settings / technical)



Daily protocol

16.01.2024
serial number 10497610



Maintenance

Maintenance	Value
Last maintenance	21.09.2023
Next maintenance	5941h
Loads to maintenance	3620

Operating times

	Day	Total
Total time	3h 7min	1681h
Wash pump	0h 12min	76h
Wash pump for SSF	0h 0min	0h
Dose detergent	0h 2min	12h
Dose rinse aid	0h 0min	6h
Heating in LPSG	1h 41min	1004h
Cold water filling valve	0h 19min	148h
Hot water filling valve	1h 1min	396h
Unlock main nozzle	0h 12min	60h
Blower	0h 52min	561h
Open door	0h 1min	18h
Close door	0h 1min	19h
Unlock door	0h 0min	3h
Lock door	0h 0min	3h

Counter

	Day	Total
Total loads	20	1380
Programme position 1	0	40
Programme position 2	0	2
Programme position 3	20	1338
External start 1	0	0
External start 2	0	0
C&D time switch	0	0
SSF time switch	0	0
Ventilate rinse aid	0	4
Ventilate detergent	0	3

Water consumption

	Day	Total
Cold water	324l	120m³
Hot water	979l	371m³

Chemical consumption

	Day	Total
Detergent	251ml	57l
Rinse aid	32ml	13l

Hygiene settings

	Value	Value	
Disinfection mode	2	Disinfection temperature	85°C
A0 value (global)	600	Disinfection time	75sec
Minimum A0 value	60		
Min. temperature A0	70°C		



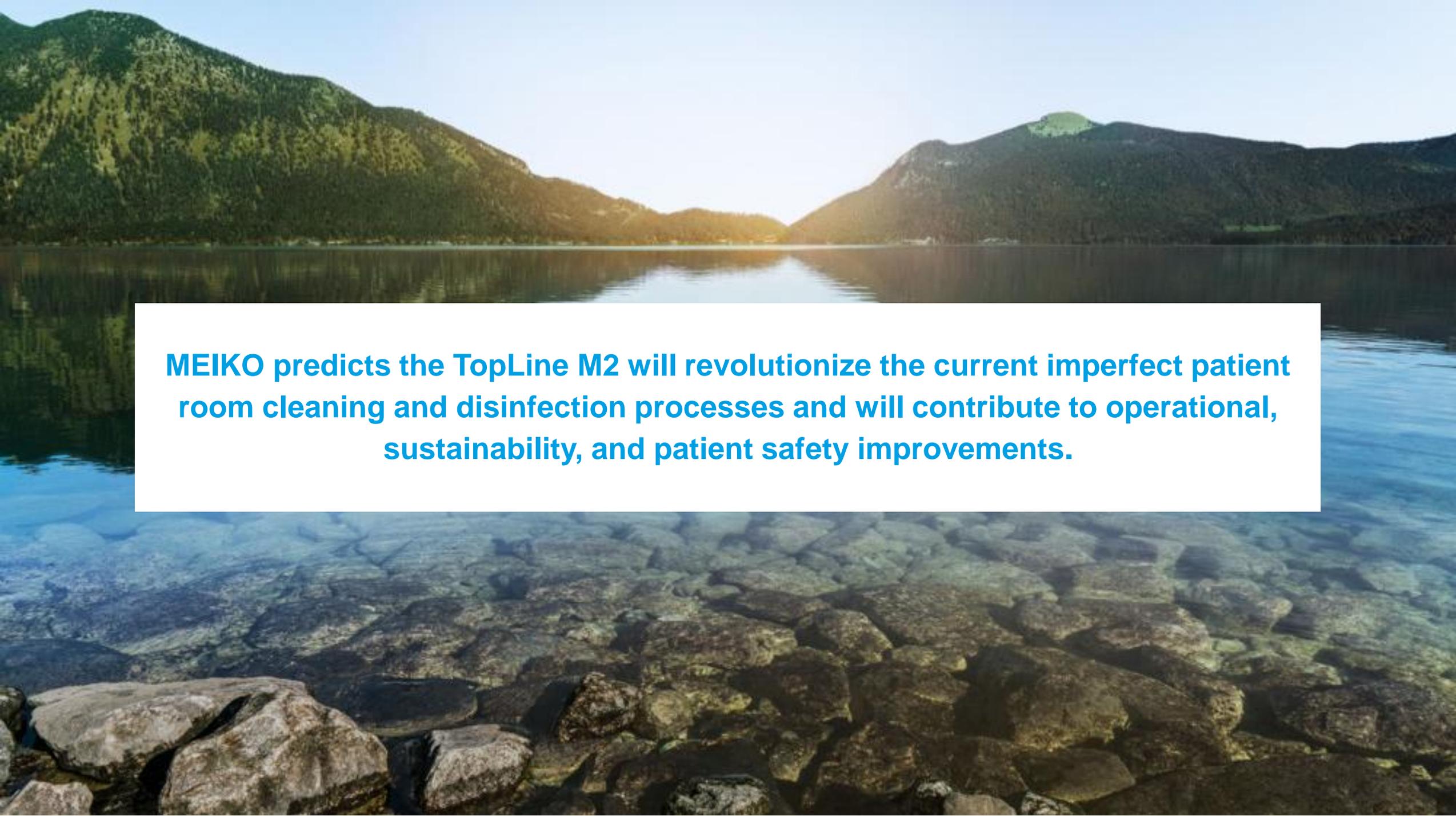
...safety...



Up to A_0 value 12.000 possible



- Hygiene safety
- A_0 value selectable as per ISO 15883
- Investment in the future



MEIKO predicts the TopLine M2 will revolutionize the current imperfect patient room cleaning and disinfection processes and will contribute to operational, sustainability, and patient safety improvements.