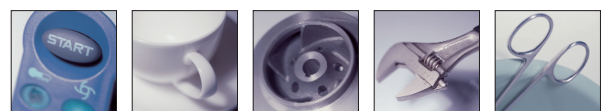




# DEKO 2000

Washer-disinfector





Loading side view

## RELIABLE PERFORMANCE

The DEKO 2000 is designed and constructed to meet the performance and design requirements stated in EN ISO 15883-1 Washer-disinfectors - Part 1: General requirements and in Part 2: Requirements and tests for surgical instruments, anaesthetic and respiratory equipment, hollowware, utensils, glassware etc., as well as, the safety requirements stated in IEC 61010-2-40: Particular requirements for washer-disinfectors used in medical, pharmaceutical, veterinary and laboratory fields.

Process results are guaranteed throughout:

- water pressure for washing is supplied by a high powered 800 litres per minute circulation pump
- pipework and the number of loading shelves fitted with rotating spray arms are calculated to have the maximum soil removal efficacy
- wide selection of disinfection temperatures and cycle times to secure the microbial killing impact
- fast HEPA filtered drying

Cycles can be altered to meet almost any special requirement, though the standard requirements are met with the fixed, tested and approved programs inserted by the manufacturer.

The washing spray patterns are delivered through five rotating spray arms and purpose designed racks to guarantee the contact with all surfaces and crevices of instruments with the most intricate design.

## PLC CONTROL

The DEKO 2000 is equipped with a Programmable Logic Control system. The user interface with a graphic display provides clear instructions and information on the operation and on-going cycle.

Pass-through models have in addition also indicators at the unloading side for on-going cycle, process completed and fault.



## SAFETY AND COMFORT

The DEKO 2000's compact dimensions are based on thorough ergonomic research and practical studies. The opening height of the doors, all controls at eye level and flexible usage of the wash chamber with individually removable shelves make the DEKO 2000 simple and comfortable to work with.

With the horizontally front-opening doors, separate transfer carts can be avoided and the loading and unloading is made easier, safer and more hygienic. Any residual fluid dripping from the load is collected on the inner door surface, which is washed and decontaminated during each completed cycle.

The doors open & close smoothly and are locked securely throughout the cycle.

Clear text on the display and a green indicator light will advise when the doors are unlocked for opening. An audible indicator may be added to draw attention to the ending of the cycle.

Shockproof windows allow a visual check upon the status in the wash chamber.

All parts of the machine and washing accessories coming into contact with the processed items are being cleaned and disinfected simultaneously and separate manual handling is unnecessary.

## VERIFYING THE PROCESS DATA

In order to guarantee that the values of the critical process variables were truly obtained and as programmed, the DEKO 2000 is equipped with an integrated process verification printer.

The optional model with a 5.7" TFT Touch Screen Operator and Display Panel can also download cycle information directly through Intranet or save data on a USB Memory Stick, i.e.: institution name, date and time, operator and machine identification, cycle number, selected cycle name, phase descriptions, washing pressure, detergent dose stage and volume (option), chamber temperature throughout the process and faults.



Standard LCD display & User Interface and the integrated process verification printer.





Unloading side view

## FOR THE PROFESSIONALS

The DEKO 2000 is manufactured by polished stainless AISI 304 stainless steel, it is easy to keep clean and can withstand continuous use. Galvanised and painted metals and other non-compatible materials are totally avoided in the manufacture of the DEKO 2000. Special attention has been paid to sound and heat insulation by using double sheet constructions and the most efficient and environmentally friendly materials.

Durability and reliability in continuous, heavy and busy institutional operating circumstances have been the key factors in the design of the DEKO 2000.

## RELIABILITY

The DEKO 2000 occupies its space efficiently. One unit requires only W800xD710 mm of floor space. Connections to water, electricity, drain and ventilation are provided with all necessary safety features. Regular control & maintenance of the machine is made quick and easy by the service mode of the PLC and easily accessible components. Water is taken into the chamber directly to avoid separate cleaning and disinfection of integrated water holding tanks. User and Maintenance Manuals include all relevant details and instructions as required. Any information, advice, personnel training and service calls are attended to with the utmost dedication and urgency. Availability of spares is guaranteed for the minimum of 15 years after date of shipment and the complete programme and software lodged securely with an independent body.

## EASE OF USE

The advanced control system allows setting up practically an unlimited number of tailored programs. There is an option of 3 most commonly used cycles available at the touch of a button and a cycle memory library with scroll selection. Process parameters are protected by special codes and a number of tested and approved cycles can be set fixed, only to be altered by the manufacturer. Use of the machine solely by authorised and trained personnel is facilitated by a 3-level access code system. Accurate instrumentation and the fast processor secure that the circumstances in the process are held within the pre-set limits in order to obtain the required cleaning and disinfection result. Protection to thermo-labile medical devices is provided by double overheating prevention.

Cleaning efficacy is increased by dosing automatically the precise adjusted volume of one or more detergent at the correct time of the wash cycle. Containers are safely positioned into an easy accessible opening that can be supplied optionally with a lockable door for added safety. The intelligent control system monitors the washing pressure constantly and secures the achievement of the pre-set process values.

Advice when detergent volume is running low is given at the start of five consecutive cycles. If the volume is insufficient for the selected process then the cycle will not start.

## SUMMARY OF FEATURES

- overall dim. W800xD710xH1970 mm
- usable wash chamber dim. W600xD610xH610 mm
- electricity U 400V 3N AC 50Hz (or 60Hz), max 13 kW, 3 x 25A. Other voltages as required.
- powerful circulation water pump, output 800L/min
- framework, panels and wash chamber all made of stainless steel. No mild steel or galvanized steel frame constructions.
- interlocking opening doors provided with springs and safety locks
- fully automatic PLC control including back-up batteries for full memory protection
- 3+1 cycle selection & start keys
- phase indication as text
- remaining program time indication
- cycle complete indication as text and with a green led
- fault indication
- multi-level access code system. Special codes for: user, maintenance, authorized person
- secure tested cycle files
- customized cycle files
- access to regulation of critical process parameter values with authorized person entry code only
- in-process indication
- cycle & phase info
- remaining cycle time
- unloading end:
- in-process indication
- cycle complete: green led
- fault indication: red led
- independent process verification recording system
- integrated process verification printer
- information:
  - institution name
  - date and time
  - machine number
  - non-resettable cycle number
  - cycle name and configuration
  - cycle start and end time
  - temperature recording throughout the cycle
  - fault identification and registering
- special service and maintenance control system
  - malfunction identification in code format
  - adjustment of controls
  - calibration of measuring instruments
  - manual override step by step
  - component test mode
  - error listing
  - updates by a PC and memory card
  - no need to program the functions of individual electrical components
- 4 independently removable, sliding wash shelves
- automatically connecting / closing wash arm connectors
- 5 rotating wash arms with removable caps facilitating easy cleaning of the inner surfaces of the wash arm. No tools required for removing the wash arms.
- adjustable automatic detergent dosage pump
- indication for insufficient volume of chemicals to complete cycle
- place for process chemical containers
- boss entry port for test temperature sensor leads
- high efficiency dryer with a pre-filter and a HEPA filter Class H13
- ventilation connection provided with a spigot up-stand sleeve and condensate back-flow protection
- filter quality monitoring and change indication system
- drying mode may be used individually
- load temperature protection and overtemperature cut-outs
- automatic foam and washing water pressure control system
- opaque cold and hot water connection hoses ½" BSP
- drain outlet diameter 50 mm
- sound and heat insulated
- shockproof window(s)
- height adjustable feet
- stainless steel side panelling
- back syphon Type A air gap protection
- shut-off isolator valves
- mutable process complete buzzer



## ■■■ Instruments

**Though developed for the cleansing of medical instruments and anaesthesia equipment, DEKO baskets and racks also serve as storage and carrying baskets.**

### 1.

381100 Sterilization basket  
585 x 395 x 195

310101 Divider

### 2.

381110 Sterilization basket  
585 x 395 x 100

### 3.

381103 Sterilization lid

### 4.

381170 Utensil basket (includes lid)  
340 x 250 x 200

### 5.

381200 Instrument basket 450 x 340 x 70

381210 Instrument basket 340 x 250 x 70

381220 Instrument basket 250 x 170 x 70

381201 Lid 450 x 340

381211 Lid 340 x 250

381221 Lid 250 x 170

### 6.

381202 Narrow-mesh internal basket  
430 x 320 x 50

381212 Narrow-mesh internal basket  
320 x 230 x 50

381222 Narrow-mesh internal basket  
230 x 150 x 50

381203 Lid 430 x 320

381213 Lid 320 x 230

381223 Lid 230 x 150

### 7.

381300 DEKO half-basket  
440 x 290 x 180

381301 Divider

### 8.

381310 Rack for anaesthesia equipment

### 9.

381340 Washing rack  
for sigmoidoscopes



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**10.**  
381314 Rack for anaesthesia equipment  
for machines incl. a dryer



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**11.**  
381350 Washing rack for Bird hoses



⑫

**12.**  
381360 Washing rack for suction hoses

**13.**  
381343 Rack for rigid scopes

**14.**  
381460 Shoe rack

**15.**  
381685 Kidney bowl rack



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## ■■■ Shelves

**The same washer is used for both hospital instruments and laboratory glassware. By switching washing shelves the user can apply the DEKO washer to many different purposes.**



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**16.**  
374073 Middle shelf for hospital  
instruments  
(includes washer arm)

**17.**  
374078 Middle shelf for laboratory use  
(includes washer arm)



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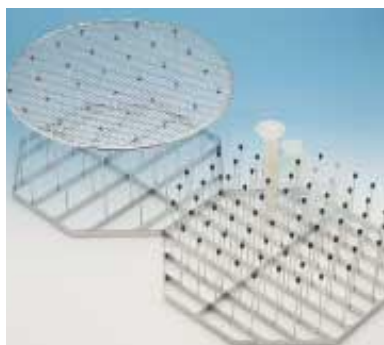
## ■ ■ ■ Laboratory



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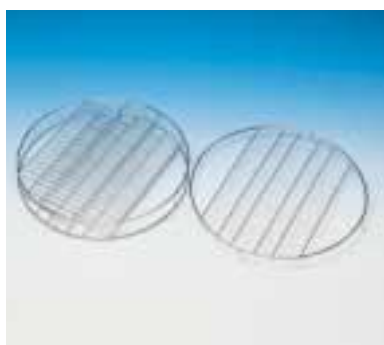
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**The versatile equipment makes the cleansing of laboratory glassware easy and efficient.**

### 1.

381500 Sector basket, h = 135  
 381501 Lid  
 381510 Sector basket, h = 210  
 381502 Divider, h = 50  
 381503 Divider, h = 90  
 381504 Divider, h = 125  
 381505 Divider, h = 180

### 2.

381515 Pegged rack

### 3.

381520 Pegged rack, h = 150  
 381530 Pegged rack, h = 250  
 381535 Pressure lid

### 4.

381540 Microscope-slide rack

### 5.

381550 Petri dish rack

### 6.

381555 Washing rack for graduated flasks

### 7.

381580 Washing rack for beakers

### 8.

381590 Washing carriage for pipettes

### 9.

381531 1/1 lid  
 381532 1/2 lid  
 - for rack 381555

### 10.

N23658 Support star for bottles, Ø 8 mm tube  
 N23659 Support star for bottles, Ø 6 mm tube  
 N24366 Height adjustment spring, Ø 8 mm tube  
 N24435 Height adjustment spring, Ø 6 mm tube  
 381557 Bottle holder, Ø 6 or 8 mm tube

### 11.

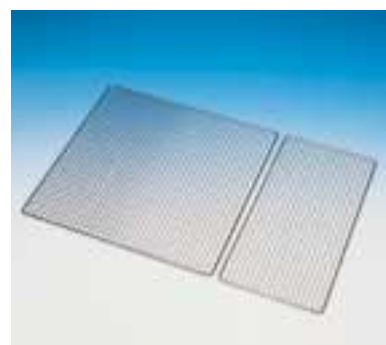
381725 Tension key for spray tubes



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## ■ ■ ■ Dental equipment



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## ■ ■ ■ Bottles



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②

**The baskets and racks developed for various dental equipment cleansing needs are well suited to the various DEKO washer models. Washing racks are also manufactured according to the customer's wishes.**

### 1.

381215 Instrument basket on end plates  
340 x 250 x 70  
381216 Rack for instrument basket  
381211 Lid for 381215

### 2.

381217 Compartment for mirrors and instruments

### 3.

381385 Washing rack for saliva- and suction-tubes

### 4.

381162 Dental tray rack

### 5.

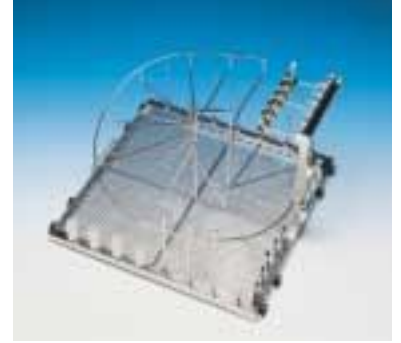
381397 Hose rack

### 6.

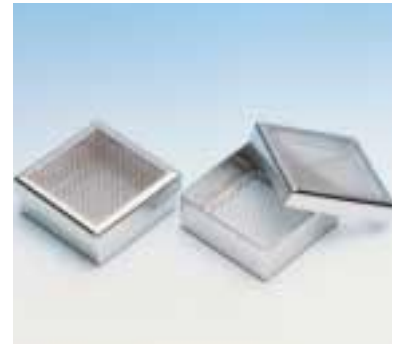
381230 Fine mesh box for needles and  
bore bits 90 x 90 x 40 mm



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**For bottle washing, rack compartments and spray racks for various bottle sizes are supplied to laboratories and dairy kitchens.**

### 1.

381700 Bottle washing rack 150 g  
381710 Bottle washing rack 250 g  
381720 Bottle washing rack 500 g

### 2.

381701 Bottle compartment 150 g  
381702 Lid 150 g  
381711 Bottle compartment 250 g  
381712 Lid 250 g  
381721 Bottle compartment 500 g  
381722 Lid 500 g

### 3.

381603 Bottle washing rack,  
custom made



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## TECHNICAL DATA

Type	DEKO 2000
<b>Outer dimensions mm:</b>	
Width	800
Depth	710
Height	1970
Weight kgs	250
<b>Usable chamber volume L</b>	220
<b>Usable inner dimensions mm:</b>	
Chamber height	600
Chamber width	600
Chamber depth	610
Wash levels	4
<b>Usable height/level, mm</b>	95/135
<b>Wash arms max.</b>	5
<b>Basket capacity:</b>	
SPRI basket 1/2, 340x250x70 mm max.	16
DIN 480x255x50 mm max.	8
DIN 240x255x50 mm max.	16
DIN 120x255x50 mm max.	32
EURO 600x300x70 mm max.	8
EURO 300x300x70 mm max.	16
EURO 150x150x70 mm max.	32
<b>Water filling volumes L/one phase:</b>	
Rinse	19
Wash	19
Disinfection	19
<b>Electricity</b>	
U 400V 3N AC 50/60Hz, E-models	3x25A
U 400V 3N AC 50/60Hz, D-models	3x16A
U 200-240V 3PH AC 50/60Hz, E-models	3x35A
U 200-240V 3PH AC 50/60Hz, D-models	3x16A
<b>Capacity &amp; effects:</b>	
Total power kW, E-models	12,8
Heating power kW, E-models	10 or 7,5
Dryer kW	6.0
Circulation pump kW	2.8
Outlet size diameter in mm	50
Purewater pump kW, optional	0.5
<b>Water flow L/sec</b>	0,5
<b>Steam consumption kg/min, D-models</b>	0,5
<b>Condense return kg/min, D-models</b>	0,5

### MODELS:

E = electrically heated  
D = steam heated  
X = pass-through  
L = laboratory  
K = dryer

E.g. Deko DEKO 2000EXLK =  
electr. heated pass-through  
laboratory model incl. dryer

Note. Available also excl. dryer.

### INCLUDED AS STANDARD:

- 4- level shelves
- 5 wash arms
- 1 detergent pump

### TESTS/APPROVALS:

ISO 9001  
ISO 14001  
ISO 13485  
SIS TR-3:2001  
EN ISO 15883-1, 15883-2  
IEC 61010-2-40  
CE 0537

Subject to changes without further notice. Please ask the supplier for confirmation as required.

## OPTIONS

- excluding dryer
- max. 2 extra detergent pumps
- max. 1 adjustable rinse aid pump
- solenoid valve, feed pump and hose for purified water
- detergent dose volume verification (optional)
- washing pressure registering (optional)

## OVERALL DIMENSIONS AND MASS

### OUTER DIMENSIONS:

Width  $M_w$  800 mm  
 Depth  $M_d$  710 mm  
 Height  $M_h$  1970 mm  
 Loading height above floor  $L_h$  850 mm

### CHAMBER DIMENSIONS:

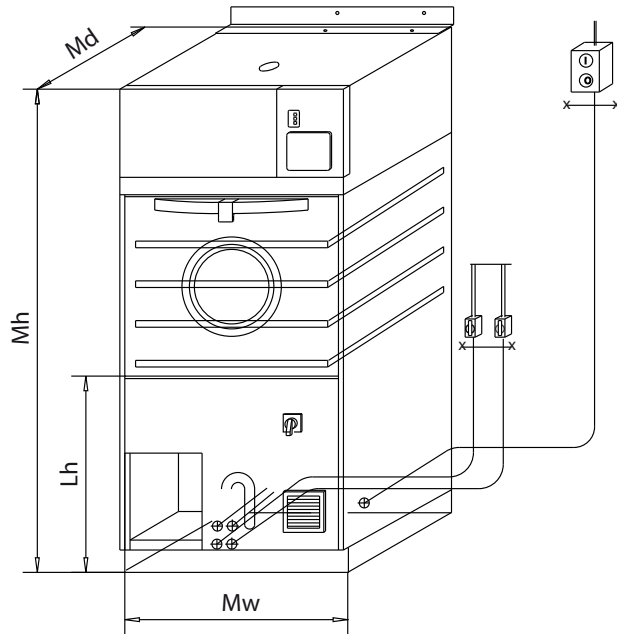
Width  $C_w$  600 mm  
 Depth  $C_d$  610 mm  
 Height  $C_h$  610 mm  
 Volume 347 / 220 L (0.22 m<sup>3</sup>)

### LEVELS:

Lower level  $L_1$  min/max 95/135 mm  
 Middle level  $L_2$  min/max 95/135 mm  
 Middle level  $L_3$  min/max 95/135 mm  
 Upper level  $L_4$  95 mm

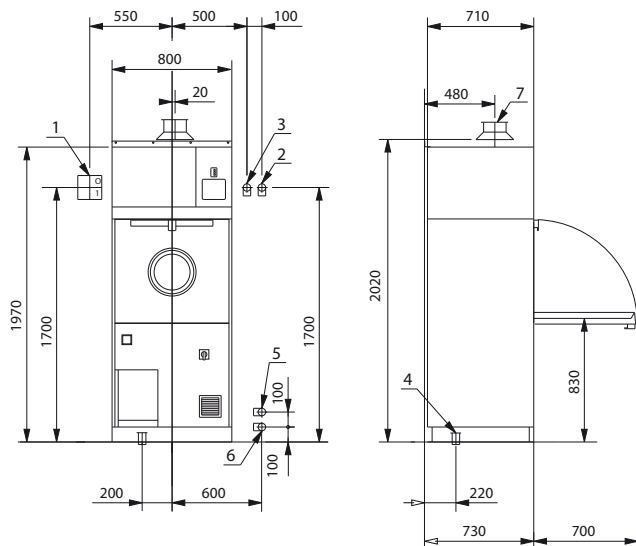
### MASS:

Weight with drying unit 250 kg  
 Weight without drying unit 230 kg  
 Floor loading 0.05 kN./cm<sup>2</sup>



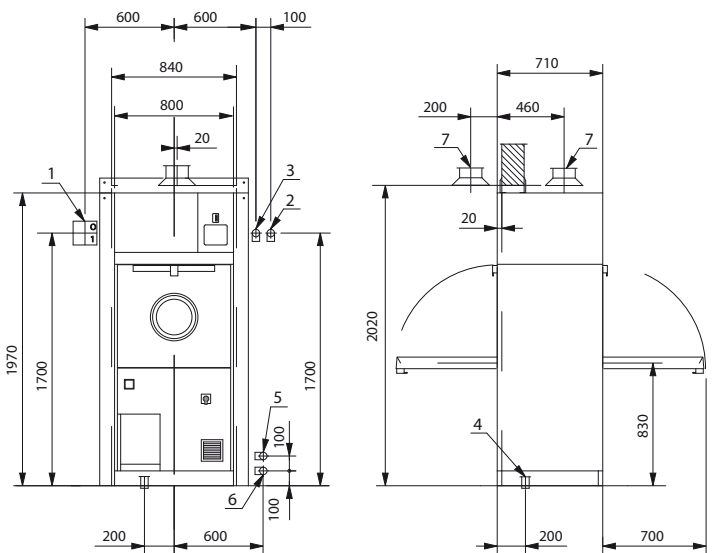
## INSTALLATION

Installation of single door machine



1. Circuit breaker (supplied by the buyer)
2. Cold water R1/2" (female), shut off valve (supplied by the buyer)
3. Warm water R1/2" (female), shut off valve (supplied by the buyer)
4. Drain outlet NS dia 50 mm
5. Steam connection R1/2" (male)
6. Condensate connection R1/2" (male)
7. Exhaust duct dia 90 mm

Pass through model, 1-unit



Wall opening for pass-through model, side by side installation  
 Width of wall opening is  $n \times 800 \text{ mm} + 40 \text{ mm}$   
 e.g. three machines  $3 \times 800 \text{ mm} + 40 \text{ mm} = 2440 \text{ mm}$   
 Please check the opening requirements by the supplier.



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