

PRODUCT SPECIFICATION

DEKO 190

Ward Washer Disinfector



Preventing infections since 1976.

DEKO
MEDTECH

Intended use

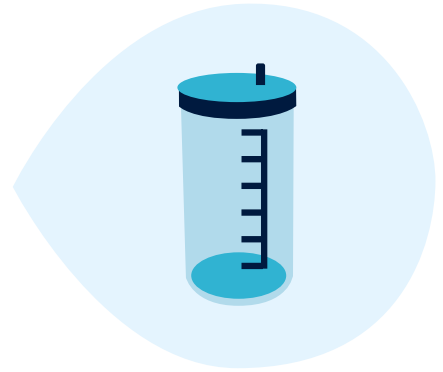
The DEKO 190 Ward Washer Disinfector empties, cleans and thermally disinfects by steam a variety of reusable ward utensils, such as;



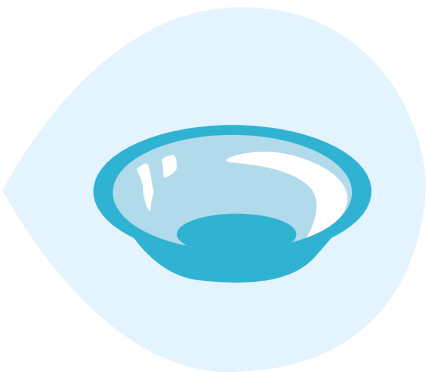
Portable sanitary pans



Urine bottles and kidney dishes



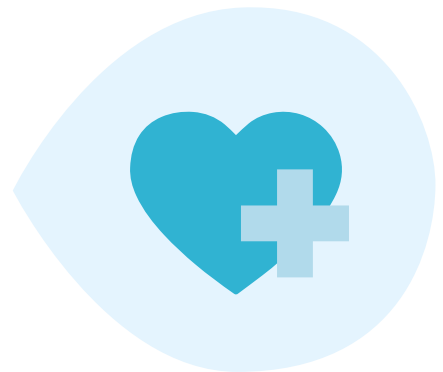
Suction bottles, measuring jugs and various hollowware



Hospital bowls (patient wash bowls)



Raised toilet seats and toilet brushes / holders



Products alike the above and used for similar purposes within patient care

Unique washing efficacy

Fresh-water recirculation principle similar to instrument washer-disinfectors provides superior cleaning and disinfection results. Thanks to high water pressure combined with minimum usage of water and energy, an outstanding mechanical washing efficiency is reached on economic consumption values. Thermal disinfection is executed according to EN ISO 15883

AO-600 requirement and carried out by steam, integrally generated in an unpressurized steam generator. All internal surfaces are washed and in addition to the utensils being processed, the water tank, piping, outlet and chamber are disinfected in each cycle.



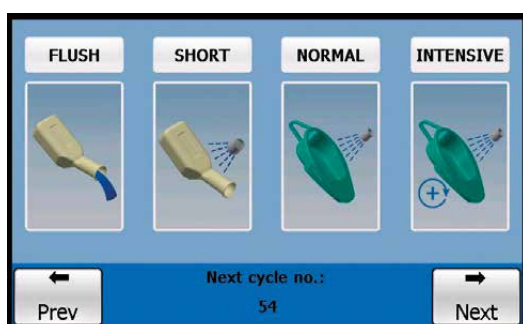
DEKO 190 X2

- Independent tamper-proof process recorder
- 7" display
- Network connectivity
- Remote access
- Panel printer
- Automatic non-touch door



DEKO 190 GT

- Independent tamper-proof process verification
- 3,7" display
- Standalone





Features and functionalities

– benefits for the user

Large Capacity, extended versatility

Large wash chamber and capacity for automatic emptying and processing of 2 bedpans with lids and 4 urine bottles simultaneously. The machine is equipped with an integrated drop-down shelf and it can also accommodate specialized inserts and washing accessories to process a large variety of utensils used at wards. See the brochure for further information on available washing accessories.

Advanced State-of-the-art control

Control by a Programmable Logic Controller (PLC) with the most advanced operating system available today. The access code system protects any unauthorized changes to the washing cycles and set parameters with special codes for maintenance and user defined cycle programming. Special service and maintenance control system restore valuable information for technical performance follow-up and evaluation and enables component testing.

Boss entry port for test temperature sensor leads

Machine is equipped with boss entry port to insert temperature sensors to perform IQ, OQ, PQ (when requested by the user).

Pressure control for foam and washing water

To secure powerful washing efficacy, foam and washing water pressure control ensure proper water pressure is maintained during water circulation and throughout the whole washing cycle. In case of excess foam or sudden drop of circulating water pressure, machine automatically drains the chamber and restarts the aborted process cycle step from the beginning (max. 3 times). Failure to reach the predefined parameters will result in an interruption of the cycle and an error notification on the display.

Independent tamper-proof process verification (GT)

Machine is equipped with a temperature indicator, independent from the controller, to allow the user to verify attainment of programmed disinfection temperature. The verification is executed according to EN ISO 15883-3, clause 5.11.4 level a).

Independent tamper-proof process recorder (X2)

Machine is equipped with a temperature recorder, with sensors and signal processing independent from the controller, to record the attainment of programmed disinfection conditions.

Machine stores all cycle process data such as:

- Name of institution
- Date & time
- Machine identification
- Sequential cycle number
- Cycle name and configuration
- Cycle start and end time
- Temperature
- Water pressure

Internal storage of 32 GB for recording all process data, transferable to external USB memory stick or throughout an optional network connectivity (FTP over Ethernet) to external fileserver. USB -memory stick to store the process data. The verification is executed according to EN ISO 15883-3, clause 5.11.4 level b).

Panel printer (optional feature)

Panel printer to print process data (see "Independent tamper-proof process recorder"). Available for DEKO 190 X2.

Network connectivity (Ethernet) (optional feature)

Network connectivity feature allows:

- Remote monitoring of the machine over network
- Logging process events over network to email client
- Sending process data printouts to local and network printer
- Storing process data to external files server (FTP over Ethernet)
- Available for DEKO 190 X2. See "DEKO WD networking, System description" for more information.

Remote access (optional feature)

Capability for remote access allowing remote service support. See "DEKO WD networking, System description" for more information.

Display

Easy-to-use touch screen display providing enhanced process control. DEKO 190 X2 is equipped with 7" colour and DEKO 190 GT with 3,7" 5-colour touch-screen (alerts in colour). The display provides clear and informative user and service instructions. Cycle phase indication: current cycle name, sequential cycle number, estimated remaining cycle time, current phase and chamber temperature. Additionally, on DEKO 190 X2 pressure indication shown as a graph.

Washing cycles

By default, a choice of 4 different factory-set programs tested and approved to meet standard EN ISO 15883 requirements. Programs are easily adaptable to suit special washing and disinfection requirements. Internal memory provides a pre-set cycle library for creating a practically unlimited number of programs. Machine is also equipped with a user adjustable audible indicator notifying end of cycle.

Door

Manual hinged door as standard feature. A 'Non-Touch' door activated by an optical sensor is available as an option for DEKO 190 X2. Door functionality is equipped with secured door interlocking system. A clear text on the display will advise when the door is unlocked for opening. Door opens 120° making it easy to accommodate the utensils to be washed on correct positions inside the chamber i.e. the machine is designed to empty the utensils on behalf of the user.

Detergent dosing

- Suction tube:
The length of the suction tube is adjustable to ensure fit for all types of detergent containers.
- Adjustable detergent pump:
Detergent is dosed onto recirculating wash water by a pump. Dosage is freely adjustable to match detergent specific concentration guidance.
- Detergent low-level indication:
The detergent suction hose is equipped with a float switch to monitor sufficient detergent availability and to advise the user to replace the container when detergent level is below minimum.
- Flow meter for detergent dosing (optional feature):
Measures the volume of dosed detergent and verifies the correct dosing requested. Available for DEKO 190 X2.
- Detergent dosing flushing cycle:
Special flushing cycle to remove detergent build-up (precipitate) by hot water from the dosing system.

Descal dosage pump (optional feature)

Pump doses requested amount of descale agent into the steam generator on each cycle to prevent formulation of lime thereby prolonging the lifecycle of the heating elements.

Chamber cleaning

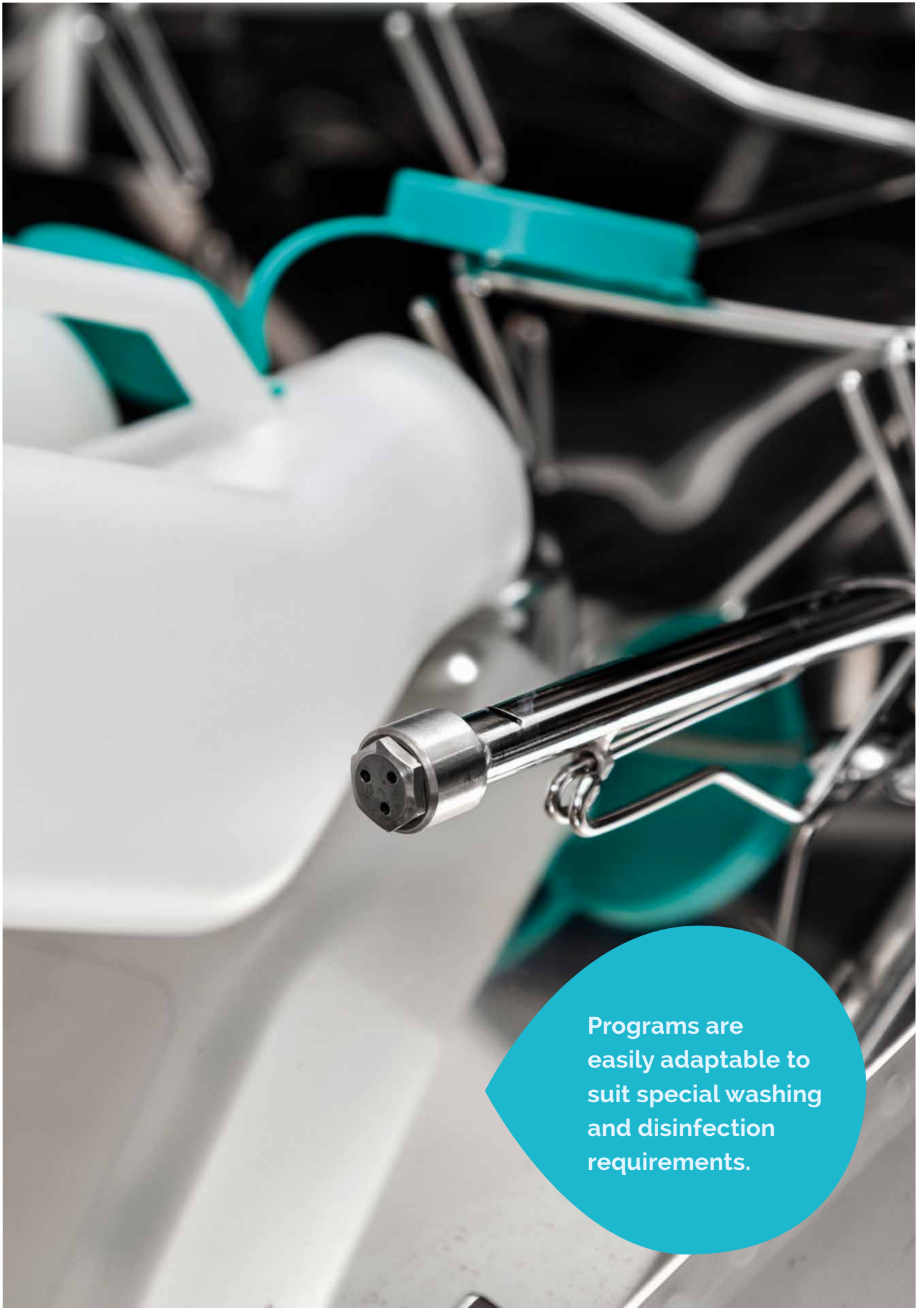
Special factory built-in washing cycle to remove lime deposit from washing chamber using lime removal agent. Note! Lime removal is performed for the chamber only, not for the steam generator as with the descale dosage pump option.

Vapour condenser

For evaporating steam generated in thermal disinfection phase after disinfection is finished, allowing chamber door opening immediately after the cycle is completed.

Back syphon protection

Machine is equipped with either backflow prevention valve or Open air gap solution to prevent back syphon from water supply. Please consult local authorities to check country specific requirements.



Programs are easily adaptable to suit special washing and disinfection requirements.

Technical info

Model	X2	GT
Material	Stainless EN 1.4301 steel	
User interface / Display		
7" colour Touch-Screen	X	-
3,7" 5-colour greyscale touch-screen	-	X
Door functioning		
Manual		X
Automatic Non-Touch, optical sensor	O	-
Opening angle, 120°		X
Washing mechanics		
3 rotating + 7 fixed wash jets		X
Water recirculation pump, power kW / output l/min		1.6 / 600
Measurements		
Width (mm)		600
Depth (mm)		630
Height (mm)*		1460 (standard) / 1610 (high leg)
Usable chamber volume, l		72
Wash chamber dimensions, mm (gross)		W 480 x D 360 x H 640
Loading height, mm*		740 / 890
Weight, kg		130
Floor loading, kN/cm ²		0.04
Adjustable feet for levelling ±10 mm		X
Utility connections and consumption		
Back syphon protection *	Backflow prevention valve / Open air gap	
Cold water (max 15°C) inlet hose, G1/2" female thread, length 2 m		X
Warm water (max 65°C) inlet hose, G1/2" female thread, length 2 m		X
Min – max water pressure, bar		1–8
Water volume per cycle phase, l		
• cold water flush		9
• mixed (cold and warm 50/50) water flush		9
• wash with detergent		9
• warm water rinse		9
• thermal disinfection (water quantity to generate steam)		2
• total		38
Floor drain outlet ø 110 mm		X
Wall drain ø 110 mm		O
Vapour condenser		X
Steam supply pressure (only steam heated versions), R1/2" male thread, length 1,2 m, bar		1–3
Condense pressure (only steam heated versions), R1/2" male thread, length 1,2 m, bar		1–3
Required property ventilation (exhaust air) capacity, l/s		30
Power and electric features		
Total maximum heat transmission (W/m ²)		100
Maximum fascia heat transmission (W)		60
Mean sound power level (A), dB		65
Heating power (kW) *		6,6 / 7,5
Automatic detergent dosing system		
Suction tube *	Adjustable / Telescopic	
Integrated detergent container housing		X
Detergent container housing lockable door		O
Adjustable detergent pump		X
Detergent low level indication		X
Descale dosage pump		O
Detergent flow verification	O	-

Model	X2	GT
Process control		
Load temperature protection and over temperature cut-outs		X
Pressure control for foam and washing water		X
Cycle complete indication with mutable buzzer		X
Boss entry port for test temperature sensor leads		X
Independent tamper-proof process verification	-	X
Independent tamper-proof process recorder	X	-
Panel printer	O	-
Network connectivity (Ethernet)	O	-
Remote access	O	-
Emergency stop switch		O
Regulations and standards compliance		
Medical Device Regulation, EU MDR 2017/745		X
EN ISO 15883:2006		EN ISO 15883-1, -3
ISO/TS 15883:2005		EN ISO 15883-5
RoHs 2011/65/EU, The Restriction of Hazardous Substances Directive		X
IEC 61010-1:2010		X
IEC 61010-2-040:2020		X
IEC 61326-1:2013		X
IEC 62304:2015		X
SFS-EN 62366-1		X
EN 1717:2000		X
CE 0537		X

X = Standard O = Optional - = Not available / not applicable * = Regional options

Electric connection*

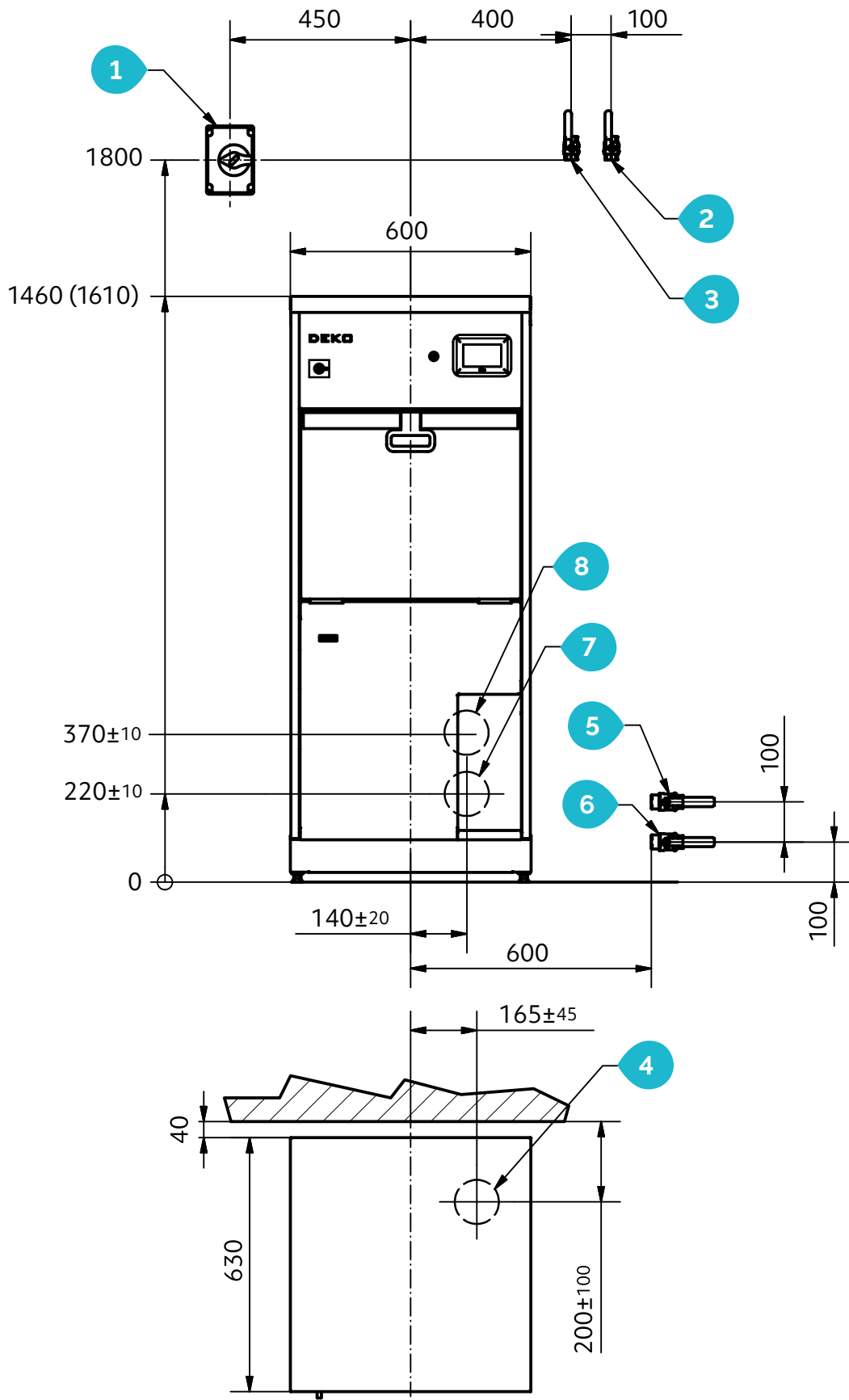
Plate values	Voltage	Current	Power	Frequency	Phases	Connection	Fuse
U 400 V 3N AC 50/60 Hz, 11 A	400 V	10,9	7500W/400V	50/60 Hz	3 N	star	3x16A
U 400 V 3N AC 50/60 Hz, 2,5 A	400 V	2,3	1600 W Steam heated	50/60 Hz	3 N	star	3x10A
U 400 V 3N AC 50/60 Hz, 9,8 A	400 V	9,6	6600W/400V	50/60 Hz	3 N	star	3x10A
U 415 V 3N AC 50 Hz, 11,5 A	415 V	11,3	7500W/400V	50 Hz	3 N	star	3x16A
U 415 V 3N AC 50 Hz, 2,6 A	415 V	2,4	1600 W Steam heated	50 Hz	3 N	star	3x10A
U 200 V 3PH AC 50/60 Hz, 21 A	200 V	19,1	6600W/200V	50/60 Hz	3 PH	star	3x25A
U 200 V 3PH AC 50/60 Hz, 4,8 A	200 V	4,6	1600 W Steam heated	50/60 Hz	3 PH	delta	3x10A
U 208 V 3PH AC 60 Hz, 19 A	208 V	19,3	6600W/200V	60 Hz	3 PH	delta	3x25A
U 208 V 3PH AC 60 Hz, 5 A	208 V	4,8	1600 W Steam heated	60 Hz	3 PH	delta	3x10A
U 220 V 3PH AC 50 Hz, 21 A	220 V	21	6600W/200V	50 Hz	3 PH	delta	3x25A
U 220 V 3PH AC 50 Hz, 5,3 A	220 V	5,1	1600 W Steam heated	50 Hz	3 PH	delta	3x10A
U 240 V 3PH AC 60 Hz, 23 A	240 V	22,9	6600W/200V	60 Hz	3 PH	delta	3x25A
U 240 V 3PH AC 60 Hz, 5,6 A	240 V	5,5	1600 W Steam heated	60 Hz	3 PH	delta	3x10A
U 230 V 1N AC 50 Hz, 29 A	230 V	28,7	6600W/230V	50 Hz	1 N	star	1x32A
U 230 V 1N AC 50 Hz, 7 A	230 V	7	1600 W Steam heated	50 Hz	1 N	star	1x10A
U 240 V 1N AC 50 Hz, 7 A	240 V	7	1600 W Steam heated	50 Hz	1 N	star	1x10A
U 240 V 1N AC 50 Hz, 30 A	240 V	29,9	6600W/230V	50 Hz	1 N	star	1x32A

Installation



1. See available voltage rating variants on page 9.
2. Cold water, flexible inlet hose with G $\frac{1}{2}$ " female thread, L = 2
3. Warm water, flexible inlet hose with G $\frac{1}{2}$ " female thread, L = 2 m
4. Waste outlet floor installation \varnothing 110 mm (dimensions for center of the outlet)
5. Steam (steam heated models only), flexible steel armored inlet hose with R $\frac{1}{2}$ " male thread, L=1,2m
6. Condense (steam heated models only), flexible steel armored inlet hose with R $\frac{1}{2}$ " male thread, L=1,2 m
7. Waste outlet wall installation at 220 \pm 10 mm \varnothing 110 mm (dimensions for center of the outlet, option to floor installation)
8. Waste outlet wall installation at 370 \pm 10 mm on high leg models (e.g. UK, SWE) \varnothing 110 mm (dimensions for center of the outlet, option to floor installation)

Main display and operation keys





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