



# WASHER DISINFECTORS

- I. Washer and Disinfectors
- II. Under-Bench Washer Disinfectors
- III. Dental Washer and Disinfectors



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## About us

Sümer A.Ş. was established in 1981 in Ankara to provide services in the medical device sector. It has aimed advancement since the day of its establishment by also taking growth and compliance with the contemporary technologies and protecting the environmental conditions. Our manufacturing takes place in an area of 25.000 m<sup>2</sup> in Ankara Organized Industrial Zone.

Our Firm is following the innovations in its sector and in abroad through its research and development unit and its application staff with a strong infrastructure of engineers, and is continuing to produce devices it had developed in computer environment based on such innovations with high technology and to contribute their development so as to be most beneficial for the Turkish medicine.

With this purpose, our Firm is strictly following the "Quality Management" principles and rules from design of the products to the after sale servicing.

Our Firm has been currently certificated for compliance with ISO 9001 quality management system, ISO 13485 medical device quality management system certificate and ISO 14001 environment management system certificate and with product certificates under MDD 93/42/EEC Medical Devices Directive and PED 2014/68/EU Pressurized Equipment certificate. Furthermore, our steam sterilizers, and disinfection and washing devices have been certificated by the German accredited body.

Our Firm is successfully implementing several projects supported by Tübitak, KOSGEB, and Ankara Development Agency.

SÜMER A.Ş. has been awarded with the following:  
Ankara Industry Chamber Award for 2012,  
2011 R&D Award,  
2012 Success Award.

Our Firm possesses the following certificates;  
CE Certificates under the following directives:  
ISO 9001,  
ISO 13485,  
ISO 14001 Quality Management System,  
MDD 93/42/EEC Medical Devices,  
PED 2014/68/EU Pressurized Equipment



## **Our Vision**

To make the Sümer brand a global brand to make our Firm remembered first in the sector.

## **Our Mission**

Our main task is to create designs with competition power in the global sense by taking the priorities of the sector into consideration and being respectful to the environment and people and giving the first priority to the wishes and expectations of customers, and also to produce innovative technological medical products by meeting all the national and international legal requirements.

## **Our Basic Values**

- We are bound up with the Medical Ethical Rules,
- We are people-oriented,
- We respect environment,
- We are creative,
- We are customer-oriented,
- We are innovative,
- We are pro-active,
- We believe in the team spirit.

## I. Washer and Disinfectors

### Automatic and Manual Door

Our product has been designed to be used for washing and disinfection of heat-resistant and reusable medical devices tools. It is used in the following:

- ─ Hospitals,
- ─ Outpatient clinics,
- ─ Rehabilitation centers,
- ─ It is used in laboratories.

It must be used by the expert technical personnel who have completed the required training for washing and disinfection process.



## Packaging and Loading

Packaging material must not be used in washing and disinfection procedure. Instead, a cart and a basket suitable for the materials to be washed.

Materials/tools must not be placed one over another or stuffed together when placing them within suitable baskets. Same types of materials must be placed together to the extent possible, and loading cart or racks must be used.

## Materials that can be subjected to washing and disinfection Programs Used and Times

- ─ Surgical tools
- ─ Operating room containers
- ─ Laboratory tools
- ─ Glass containers
- ─ Rubber materials
- ─ Plastic materials

	USED PROGRAMS AND TIMES									
	SHORT CYCLE		STANDARD CYCLE		LONG CYCLE		DRYING CYCLE		SELF DISINFECTION CYCLE	
	Temp (°C)	Time (S)	Temp (°C)	Time (S)	Temp (°C)	Time (S)	Temp (°C)	Time (S)	Temp (°C)	Time (S)
Pre-washing-1	-	-	30	120	30	120	-	-	-	-
Pre-washing-2	-	-	-	-	-	-	-	-	-	-
Washing	50	300	50	300	50	300	-	-	-	-
Rising-1	40	300	40	300	40	300	-	-	-	-
Rising-2	-	-	-	-	40	180	-	-	-	-
Rising-3	-	-	-	-	-	-	-	-	-	-
Disinfection	93	300	93	300	93	300	-	-	93	300
Drying	60	1500	60	1500	60	1500	50	600	60	1500



## General Characteristics

Control System	PLC
Way of use	Full automatic/ buttons and touch screen
Screen Type	Color TFT, Touch LCD
Screen Dimensions	7"
Keypad	Touch Screen
Printer	Thermal printer with 40 characters/ lines (Optional)
Communication	RS 232 Port / USB , Ethernet
Warning System	Warning with audiovisual and written messages
Data Storage	200 cycles
Procedure Follow-up/ Tracing	Touch screen
Mobility	Easy orientation with 4 swivel castors and with adjustable heights According to the inclination of the floor
Water Consumption	~120 L /cycle

### Structural Characteristics

Body	2,5 mm, AISI 304 Stainless Steel
Cabin	1,5 mm, AISI 316L Stainless Steel
Door	Tempered Glass
Panel Coating	1,5 mm, AISI 304 tainless Steel
Piping	Silicone Hose, 1,5 mm, AISI 304 Stainless Steel
Chamber Polishing	Electro-polishing

### Installation Requirements

Water	De-ionized water with Reverse Osmosis is recommended for high performance.
Installation Power for 200L	~ 20kW, 3 Phase, 380 VAC ±10
Installation Power for 250L-360L	~ 25kW, 3 Phase, 380 VAC ±10
Installation Power for 500 L	~ 27,5kW, 3 Phase, 380 VAC ±10

### Relevant Directives and Standards

Medical Device Directive	MDD 93/42/EEC - 2007/47/EC
Medical Device Class	Class IIb, acc. to EC MDD 93/42/EEC 2007/47/EC (Annex IX)
Low-voltage Directive	2014/35/EU EN 60601-1
Electromagnetic Compliance Directive	2014/30/EU EN 60601-1-2
Washing and Disinfection Devices	EN 15883-1 Series Standards
Quality Management System Requirements	ISO 9001
Medical Devices Regulatory	ISO 13485
Environment Management System	ISO 14001

### Safety and Quality

It protects the user against current leaks.  
 It has short circuit protection.  
 It is equipped with safety valve protection.  
 HEPA filter is used for fresh air.  
 It has password protection.  
 A system preventing the opening of both doors simultaneously is used in models with double doors.  
 An emergency button is provided.

### Temperature

Operation Range	15 oC – 110 oC
Measurement	3xPT100 (DIN A Class) Sensor
Sensor Positions	Cabin (2), Water (1)

### Pressure

Measurement	2 Pressure Sensors
Sensor Positions	Cabin (1), Air (1)



*AUTOMATIC SLIDING DOOR  
 (ADELA-WD 200, ADELA-WD 250,  
 ADELA WD-360)*



*AUTOMATIC SLIDING DOOR  
 (ADELA-WD 500)*



*MANUAL DOOR*

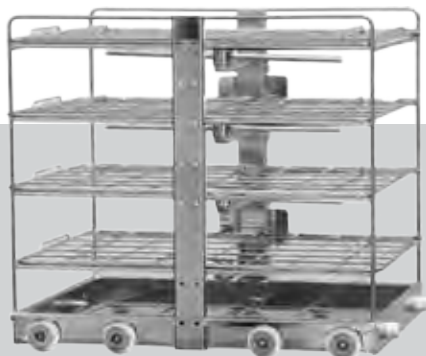


*Materials/tools must not be placed one over another or stuffed together when placing them within suitable baskets. Irregular placement of materials will prevent proper cleaning. As a result, sterilization quality will be affected also.*

## Technical Data Table

MODELS	ADELA-WD 200	ADELA-WD 250	ADELA-WD 360	ADELA-WD 500	ADELA-WD 200	ADELA-WD 250
	Large Automatic Sliding Door Capacity				Large Manual Door Capacity	
Chamber Volume (L)	200	250	360	500	200	250
Chamber Depth (mm)	600	600	835	835	735	735
Chamber Height (mm)	582	720	720	870	585	725
Chamber Width (mm)	618	618	618	618	625	625
Device Depth (mm)	825	825	1060	1060	1000	1000
Device Height (mm)	1860	1960	1960	2010	1870	2010
Device Width (mm)	855	855	855	1100	885	885
Packing Depth (mm)	1025	1025	1260	1260	1200	1200
Packing Height (mm)	2060	2160	2160	2190	2070	2190
Packing Width (mm)	1055	1055	1055	1300	1085	1085
Single Door	+	+	+	+	+	+
Double Door	+	+	+	+	+	+
Touchscreen	7"	7"	7"	7"	7"	7"
RS232	+	+	+	+	+	+
Water Heat Resistance (KW)	9	9	12,5	12,5	12,5	12,5
Drying Resistance (KW)	5,7	5,7	5,7	5,7	6	6
Drying Engine Fan Blowing Flow (m3/h)	150	150	150	150	150	150
Circulation Power Pump (KW)	1,4	1,4	2,55	2,75	1,4	1,4
Circulation Pump Electrical Connection Features	380V±10	380V±10	380V±10	380V±10	380V±10	380V±10
Circulation Pump Flow (d/d)	600	600	800	950	650	650
Detergent Dosage Pump	+	+	+	+	+	+
Neutralizing Dosing Pump	+	+	+	+	+	+
Electrical Connection	3N+1 50 Hz, 380 V	3N+1 50 Hz, 380 V	3N+1 50 Hz, 380 V	3N+1 50 Hz, 380 V	3N+1 50 Hz 380 V	3N+1 50 Hz 380 V
Water Drain Pipe Diameter (mm)	25	25	25	25	25	25
Basket Layer Quantity	4	5	5	6	4	5
DIN Basket	8	10	15	18	8	10
Hepa Filter	H14, Particle Retention Ratio %99,999					

***It is equipped with printer, oil dosage pump, disinfectant dosage pump and air spray optionally***



## II. Under-Bench Washer Disinfectors

Our product has been designed to be used for washing and disinfection of heat-resistant and reusable medical devices tools. It is used in the following:

- Hospitals,
- Outpatient clinics,
- Rehabilitation centers,
- It is used in laboratories.

It must be used by the expert technical personnel who have completed the required training for washing and disinfection process.



### General Characteristics

Control System	PLC & PCB Card
Way of use	Full automatic/ buttons and touch screen
Screen Type	Color TFT, Touch LCD
Screen Dimensions	4.3"
Keypad	Touch Screen
Printer	Thermal printer with 40 characters/lines
Communication	RS 232 Port / USB , Ethernet
Warning System	Warning with audiovisual and written messages
Data Storage	200 cycles
Procedure Follow-up/Tracing	Touch screen
Mobility	Easy orientation with 4 swivel castors and with adjustable heights According to the inclination of the floor
Water Consumption	~120 L /cycle

#### Structural Characteristics

Body	2,5 mm, AISI 304 Stainless Steel
Cabin	1,5 mm, AISI 316L Stainless Steel
Door	Tempered Glass
Panel Coating	1,5 mm, AISI 304 tainless Steel
Piping	Silicone Hose, 1,5 mm, AISI 304 Stainless Steel
Chamber Polishing	Electro-polishing

#### Installation Requirements

Supply Water	Deionized water processed with Reverse Osmosis is recommended for high performance.
Installed Power	~ 15kW, 1 Phase, 230 VAC ±10



## Technical Data Table

	Chamber Dimensions	Device Dimensions	Packing Dimensions
Depth (mm)	590	840	1010
Height (mm)	457	840	1150
Width (mm)	618	950	1150

MODELS	ADELA-WD 175
	Large Capacity
Touchscreen	4.3"
RS232	+
Water Heat Resistance (KW)	7.5
Drying Resistance (KW)	5
Drying Engine Fan Blowing Flow (m3/h)	50
Circulation Power Pump (KW)	0,4
Circulation Pump Flow (d/d)	325
Detergent Dosage Pump	+
Neutralizing Dosing Pump	+
Electrical Connection	1P+N 50 Hz, 230 V
Water Drain Pipe Diameter (mm)	25
Basket Layer Quantity	3
DIN Basket	6
Hepa Filter	H14, Particle Retention Ratio %99,999



### III. Dental Washer and Disinfectors

Adela offers a comprehensive range of thermal disinfectors and accessories for the automated cleaning and disinfection in dental practices. Our long experience in automated cleaning of surgical instruments in Central Sterile Supply Departments, in endoscopy centers and in private practices allows safe, efficient and cost-effective cleaning and disinfection procedures based on proven modern technologies.

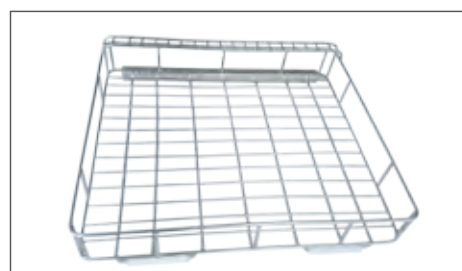
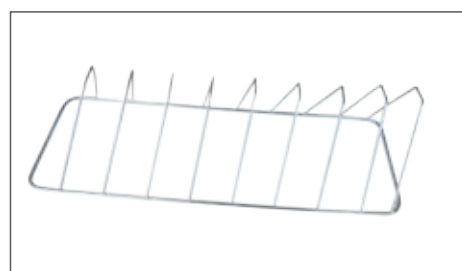


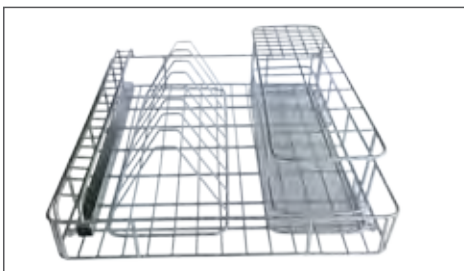
#### Technical Data Table

MODELS	ADELA-WD 40	ADELA-WD 60
	Dental Type	
Chamber Volume (L)	40 L	60 L
Chamber Depth (mm)	450	480
Chamber Height (mm)	270	270
Chamber Width (mm)	400	400
Device Depth (mm)	650	680
Device Height (mm)	685	685
Device Width (mm)	680	680
Packing Depth (mm)	950	980
Packing Height (mm)	985	985
Packing Width (mm)	980	980
Single Door	+	+
Double Door	-	-
Touchscreen	4.3"	4.3"
RS232	+	+
Water Heat Resistance (KW)	2	2
Drying Resistance (KW)	2	2
Drying Engine Fan Blowing Flow (m3/h)	50	50
Circulation Power Pump (KW)	0,4	0,4
Circulation Pump Electrical Connection Features	220V±10	220V±10
Circulation Pump Flow (d/d)	180	180
Detergent Dosage Pump	+	+
Neutralizing Dosing Pump	+	+
Electrical Connection	1P+N 50 Hz, 230 V	1P+N 50 Hz, 230 V
Water Drain Pipe Diameter (mm)	25	25
Basket Layer Quantity	1	1
DIN Basket	-	-
Hepa Filter	H14, Particle Retention Ratio %99,999	



#### Accessory







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