





**Intelispeed Washer IW-8** is designed for washing of standard flat-bottom 96 well plates and microstrips. The unit is fully programmable ensuring multi-step solution ripening, aspiration (aspiration, combination of aspiration/liquid dispensing and soaking, as well as soaking cycle during a particular period of time).

The unit has 100 user-defined programs. Standard version is supplied with 8-channel washing head for dispensing/aspiration, 3 bottles for washing and rinsing solutions, a waste bottle and bottle with filter. Optional 4-channel washing solution weight logger, 4 CHW Logger is available.

The unit is designed for washing standard 96-well plates during analyses.

# The unit provides:

Washing mode

Rinsing mode

Mixing mode

Double aspiration

Possibility of additional solution mixing during time gap between two work cycles

Possibility to use microtest plates by different manufacturers, ensured by automated plate set up (adjusting to different depths of plate wells)

Plate and strip washing mode

User-defined programs with adjustable parameters

Saving work programs

### Catalogue number:

IW-8	MA-060106-AAI
4CHW Logger	MA-060102-AK









Optional 4-channel washing solution weight logger, 4CHW Logger

# 4 CHW Logger Specifications:

Max. loading per scale cup	2 kg
Plate dimensions	267×252×97 mm
Weight, not more	3 kg

# Specifications:

Minimum dispense volume  Maximum dispense volume  Maximum dispense volume  Dispense increment  Dispensing accuracy  Allowed residual liquid volume  In plate well  Number of wells washed simultaneously  Aspiration time  Aspiration/dispensing speed  Max. number of channels in a program  Soaking time  O – 300 sec (increment 10)  Shaking time  O – 150 (increment 5)  Number of plate single wash (350 mkl), no more  Number of programs  Plate platform and washing head movement  Indication of operation modes  B-line LCD  Dimensions (W × D × H)  Weight with accessories, not more than  (external power supply, bottles, tubes, washing head, plate platform and cover)  External power supply  Consumed power, not more  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80% at +25°C decreasing linearly to 50% relative humidity at 35°C		
Maximum dispense volume1600 mklDispense increment25 mklDispensing accuracy±2.5%Allowed residual liquid volumeno more than 2 mklin plate wellNumber of wells washed simultaneously8Number of washing cycles for each channel1 – 15Aspiration time0.2 – 3 secAspiration/dispensing speed3 levelsMax. number of channels in a program2Soaking time0 – 300 sec (increment 10)Shaking time0 – 150 (increment 5)Number of washed rows1 – 12Time of plate single wash (350 mkl), no more45 secNumber of programs100Plate platform and washing head movementautomatedIndication of operation modes8-line LCDDimensions (W × D × H)375×345×180 mmWeight with accessories, not more than (external power supply, bottles, tubes,washing head, plate platform and cover)External power supplyDC 12 V, 5 AConsumed power, not more60 WThe unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Choice of 3 washing liquid bottles	
Dispense increment 25 mkl Dispensing accuracy ±2.5% Allowed residual liquid volume no more than 2 mkl in plate well  Number of wells washed simultaneously 8 Number of washing cycles for each channel 1-15 Aspiration time 0.2 - 3 sec Aspiration/dispensing speed 3 levels Max. number of channels in a program 2 Soaking time 0 - 300 sec (increment 10) Shaking time 0 - 150 (increment 5) Number of washed rows 1 - 12 Time of plate single wash (350 mkl), no more 45 sec Number of programs 100 Plate platform and washing head movement automated Indication of operation modes 8-line LCD Dimensions (W × D × H) 375×345×180 mm Weight with accessories, not more than 11 kg (external power supply, bottles, tubes,washing head, plate platform and cover) External power supply Consumed power, not more 60 W The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Minimum dispense volume	25 mkl
Dispensing accuracy Allowed residual liquid volume in plate well  Number of wells washed simultaneously Number of washing cycles for each channel Aspiration time 0.2 - 3 sec Aspiration/dispensing speed Max. number of channels in a program 2 Soaking time 0 - 300 sec (increment 10) Shaking time 0 - 150 (increment 5) Number of washed rows 1 - 12 Time of plate single wash (350 mkl), no more 45 sec Number of programs 100 Plate platform and washing head movement Indication of operation modes 8-line LCD Dimensions (W × D × H) 375×345×180 mm Weight with accessories, not more than (external power supply, bottles, tubes,washing head, plate platform and cover) External power supply Consumed power, not more 60 W The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Maximum dispense volume	1600 mkl
Allowed residual liquid volume no more than 2 mkl in plate well  Number of wells washed simultaneously  Number of washing cycles for each channel 1 – 15  Aspiration time 0.2 – 3 sec  Aspiration/dispensing speed 3 levels  Max. number of channels in a program 2  Soaking time 0 – 300 sec (increment 10)  Shaking time 0 – 150 (increment 5)  Number of washed rows 1 – 12  Time of plate single wash (350 mkl), no more 45 sec  Number of programs 100  Plate platform and washing head movement automated Indication of operation modes 8-line LCD  Dimensions (W × D × H) 375×345×180 mm  Weight with accessories, not more than 11 kg (external power supply, bottles, tubes, washing head, plate platform and cover)  External power supply DC 12 V, 5 A Consumed power, not more 60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Dispense increment	25 mkl
in plate well  Number of wells washed simultaneously  Number of washing cycles for each channel  Aspiration time  0.2 – 3 sec  Aspiration/dispensing speed  3 levels  Max. number of channels in a program  2 Soaking time  0 – 300 sec (increment 10)  Shaking time  0 – 150 (increment 5)  Number of washed rows  1 – 12  Time of plate single wash (350 mkl), no more  45 sec  Number of programs  100  Plate platform and washing head movement  Indication of operation modes  B-line LCD  Dimensions (W × D × H)  375×345×180 mm  Weight with accessories, not more than  (external power supply, bottles, tubes, washing head, plate platform and cover)  External power supply  Consumed power, not more  60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Dispensing accuracy	±2.5%
Number of wells washed simultaneously  Number of washing cycles for each channel  Aspiration time  0.2 - 3 sec  Aspiration/dispensing speed  3 levels  Max. number of channels in a program  2 Soaking time  0 - 300 sec (increment 10)  Shaking time  0 - 150 (increment 5)  Number of washed rows  1 - 12  Time of plate single wash (350 mkl), no more  45 sec  Number of programs  100  Plate platform and washing head movement  Indication of operation modes  8-line LCD  Dimensions (W × D × H)  375×345×180 mm  Weight with accessories, not more than (external power supply, bottles, tubes,washing head, plate platform and cover)  External power supply  Consumed power, not more  60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Allowed residual liquid volume	no more than 2 mkl
Number of washing cycles for each channel  Aspiration time  0.2 - 3 sec  Aspiration/dispensing speed  Max. number of channels in a program  2  Soaking time  0 - 300 sec (increment 10)  Shaking time  0 - 150 (increment 5)  Number of washed rows  1 - 12  Time of plate single wash (350 mkl), no more  45 sec  Number of programs  100  Plate platform and washing head movement  Indication of operation modes  8-line LCD  Dimensions (W × D × H)  375×345×180 mm  Weight with accessories, not more than (external power supply, bottles, tubes,washing head, plate platform and cover)  External power supply  Consumed power, not more  60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	in plate well	
Aspiration time  Aspiration/dispensing speed  Max. number of channels in a program  Soaking time  0 - 300 sec (increment 10)  Shaking time  0 - 150 (increment 5)  Number of washed rows  1 - 12  Time of plate single wash (350 mkl), no more  45 sec  Number of programs  100  Plate platform and washing head movement  Indication of operation modes  B-line LCD  Dimensions (W × D × H)  Weight with accessories, not more than (external power supply, bottles, tubes, washing head, plate platform and cover)  External power supply  Consumed power, not more  60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Number of wells washed simultaneously	8
Aspiration/dispensing speed  Max. number of channels in a program  Soaking time  0 - 300 sec (increment 10)  Shaking time  0 - 150 (increment 5)  Number of washed rows  1 - 12  Time of plate single wash (350 mkl), no more  45 sec  Number of programs  100  Plate platform and washing head movement  Indication of operation modes  B-line LCD  Dimensions (W × D × H)  375×345×180 mm  Weight with accessories, not more than (external power supply, bottles, tubes, washing head, plate platform and cover)  External power supply  Consumed power, not more  60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Number of washing cycles for each channel	el 1 – 15
Max. number of channels in a program  Soaking time  0 - 300 sec (increment 10)  Shaking time  0 - 150 (increment 5)  Number of washed rows  1 - 12  Time of plate single wash (350 mkl), no more  45 sec  Number of programs  100  Plate platform and washing head movement  Indication of operation modes  8-line LCD  Dimensions (W × D × H)  375×345×180 mm  Weight with accessories, not more than (external power supply, bottles, tubes,washing head, plate platform and cover)  External power supply  Consumed power, not more  60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Aspiration time	0.2 - 3 sec
Soaking time $0-300 \sec (increment 10)$ Shaking time $0-150 (increment 5)$ Number of washed rows $1-12$ Time of plate single wash (350 mkl), no more $45 \sec 0$ Number of programs $100$ Plate platform and washing head movement automated Indication of operation modes $8$ -line LCD Dimensions (W × D × H) $375 \times 345 \times 180 \text{ mm}$ Weight with accessories, not more than $11 \text{ kg}$ (external power supply, bottles, tubes, washing head, plate platform and cover) External power supply $0 \times 12 \text{ V}$ , $5 \times 12 \text{ A}$ Consumed power, not more $60 \times 12 \text{ W}$ The unit is designed for use in closed laboratory rooms at temperatures from $+10 \times 15 \times 12 \times 12 \times 12 \times 12 \times 12 \times 12 \times 12$	Aspiration/dispensing speed	3 levels
Shaking time $0-150$ (increment 5)  Number of washed rows $1-12$ Time of plate single wash (350 mkl), no more $45$ sec  Number of programs $100$ Plate platform and washing head movement automated Indication of operation modes $8$ -line LCD  Dimensions (W × D × H) $375 \times 345 \times 180$ mm  Weight with accessories, not more than $11$ kg (external power supply, bottles, tubes, washing head, plate platform and cover)  External power supply $DC 12 \text{ V}, 5 \text{ A}$ Consumed power, not more $60 \text{ W}$ The unit is designed for use in closed laboratory rooms at temperatures from $+10 \text{ to } +35 ^{\circ}\text{C}$ and relative humidity up to $80 ^{\circ}$	Max. number of channels in a program	2
Number of washed rows $1-12$ Time of plate single wash (350 mkl), no more $45  \mathrm{sec}$ Number of programs $100$ Plate platform and washing head movement automated Indication of operation modes $8$ -line LCD Dimensions (W × D × H) $375 \times 345 \times 180  \mathrm{mm}$ Weight with accessories, not more than $11  \mathrm{kg}$ (external power supply, bottles, tubes, washing head, plate platform and cover) External power supply $DC  12  \mathrm{V}$ , $5  \mathrm{A}$ Consumed power, not more $60  \mathrm{W}$ The unit is designed for use in closed laboratory rooms at temperatures from $+10  \mathrm{to} + 35  \mathrm{^{\circ}C}$ and relative humidity up to $80  \mathrm{^{\circ}M}$	Soaking time 0 – 3	00 sec (increment 10)
Time of plate single wash (350 mkl), no more  Number of programs  100  Plate platform and washing head movement Indication of operation modes  8-line LCD  Dimensions (W × D × H)  375×345×180 mm  Weight with accessories, not more than (external power supply, bottles, tubes, washing head, plate platform and cover)  External power supply  DC 12 V, 5 A  Consumed power, not more  60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Shaking time	0 – 150 (increment 5)
Number of programs  Plate platform and washing head movement Indication of operation modes  B-line LCD Dimensions (W × D × H)  Weight with accessories, not more than (external power supply, bottles, tubes, washing head, plate platform and cover)  External power supply  DC 12 V, 5 A Consumed power, not more  60 W The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Number of washed rows	1 – 12
Plate platform and washing head movement automated Indication of operation modes 8-line LCD Dimensions (W × D × H) 375×345×180 mm Weight with accessories, not more than 11 kg (external power supply, bottles, tubes, washing head, plate platform and cover) External power supply DC 12 V, 5 A Consumed power, not more 60 W The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Time of plate single wash (350 mkl), no mo	ore 45 sec
Indication of operation modes 8-line LCD Dimensions (W × D × H) 375×345×180 mm Weight with accessories, not more than 11 kg (external power supply, bottles, tubes, washing head, plate platform and cover) External power supply DC 12 V, 5 A Consumed power, not more 60 W The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Number of programs	100
Dimensions (W × D × H) 375×345×180 mm  Weight with accessories, not more than 11 kg (external power supply, bottles, tubes,washing head, plate platform and cover)  External power supply DC 12 V, 5 A  Consumed power, not more 60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Plate platform and washing head movemen	nt automated
Weight with accessories, not more than 11 kg (external power supply, bottles, tubes, washing head, plate platform and cover)  External power supply DC 12 V, 5 A Consumed power, not more 60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Indication of operation modes	8-line LCD
(external power supply, bottles, tubes, washing head, plate platform and cover)  External power supply  DC 12 V, 5 A  Consumed power, not more  60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Dimensions (W × D × H)	375×345×180 mm
tubes,washing head, plate platform and cover)  External power supply  Consumed power, not more  60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	Weight with accessories, not more than	11 kg
External power supply DC 12 V, 5 A  Consumed power, not more 60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	(external power supply, bottles,	
Consumed power, not more 60 W  The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	tubes, washing head, plate platform and co	ver)
The unit is designed for use in closed laboratory rooms at temperatures from +10 to +35°C and relative humidity up to 80%	External power supply	DC 12 V, 5 A
temperatures from +10 to +35°C and relative humidity up to 80%	Consumed power, not more	60 W



# 3D-IW8, Inteliwasher 3D-IW8 3D-IW8

Inteliwasher **3D-IW8** series microplate washer is designed for washing various types of standard 96-well microtitre plates, microstrips as well as microarrays on rectangular well shape. It is suitable for washing wells with different bottom shapes: flat, U-shape and V-shape. The unit is fully programmable ensuring multi-step solution ripening, aspiration (aspiration, combination of aspiration/liquid dispensing and soaking, as well as soaking cycle during a particular period of time). Dispense system of liquid dosage for each channel separately.

### The unit provides:

Washing mode

Rinsing mode

Mixing mode

Single point, two point, circular (circle or rectangular path) aspiration Possibility of additional solution mixing during time gap between two work cycles

Possibility to use microtest plates by different manufacturers, ensured by automated plate set up (adjusting to different depths of plate wells)

Round-bottom plate and strip washing mode

Possibility of user-defined programs with adjustable parameters

### Catalogue number:

3D-IW8	MA-060102-AAI
4CHW Logger	MA-060102-AK





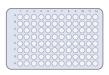




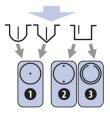


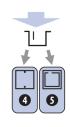
The unit has 50 programs divided into 5 following aspiration categories (see figure bellow):

- 1 Type 1 (1.0–1.9) IPF96 U/V is intended for round and V-shape immunoplates, 1 point aspiration.
- **Type 2** (2.0–2.9) **IPF96 FLAT-2** is intended for flat-bottom shape immunoplates, 2 point aspiration.
- **3** Type **3** (3.0–3.9) **IPF96 FLAT-C** is intended for rectangular shape immunoplates, full-circle aspiration direction.
- 4 Type 4 (4.0–4.9) FastFRAME-2 is intended for multi-slide plate\* with rectangular wells.
- 5 Type 5 (5.0–5.9) FastFRAME-C is intended for multi-slide\* plate with rectangular wells.
- \* The **FastFRAME** multi-slide plate or analog plate of another manufacturer, that is compatible with standard 25 × 76 mm (1 × 3 inch) glass slides.











# Specifications:

Minimum dispense volume		25 μ
Maximum dispense volume		1600 μΙ
Dispense increment		25 µl
Dispensing accuracy		±2%
Allowed residual liquid volume in	plate well, not more	2 μΙ
Number of wells washed simultan	eously	8
Number of washing cycles		1–15
Aspiration time		1–3 sec
Final aspiration time		1–3 sec
Aspiration/dispensing speed		3 levels
Max. number of channels in a program 2		
Choice of 3 washing liquid bottles		
Soaking time	0-300 sec (increme	ent 10 sec)
Shaking time	0-150 sec (increm	nent 5 sec)
Number of washed rows		1 – 12
Time of one plate wash (300 $\mu$ 'B5	l), not more	65 sec
Number of programs		50
Plate platform and washing head	movement	automated
Indication of operation modes	L	.CD, 8-line
Dimensions (W × D × H)	375 × 345	× 180 mm
Weight with accessories		10.5 kg
External power supply	DC 12	2 V, 4 <b>.</b> 16 A
Consumed power, not more		60 W

The unit is designed for use in closed laboratory rooms at temperatures from +10°C to +35°C and relative humidity up to 80% at +25°C decreasing linearly to 50% relative humidity at 35°C.

Logger dimensions (W × D × H)	267 × 252 × 97 mm
Logger weight not more	3 ka

4-channel washing solution weight logger, **4 CHW Logger** provides automatic control of rinsing solution and waste volumes. The washer shows remaining volume for each bottle as percentage and gives a warning message in case of low solution volume or full waste bottle when 4CHW Logger is connected.



# FTA-1, Aspirator with trap flask



Aspirator with trap flask **FTA-1** is designed for aspiration/removal of alcohol/buffer remaining quantities from microtest tube walls during DNA/RNA purification and other macromolecule reprecipitation techniques.

The device can be used also for routine operations of cells washing from culture medium and resuspension in buffer. Aspirator operation principle is based on creating negative pressure in trapping flask using built-in microcompressor. The collecting tip is connected with polyethylene tube to the trapping flask. Liquid is removed from the microtest tube when the collecting tip touches the solution surface. A tube holder-organizer is conveniently located at FTA-1 right hand side; it accommodates two tubes (e.g. for hydrochloric acid solution and distillate) necessary for collecting tip washing and storing, so that a tip can be re-used.

1 A suction microbiological filter eliminates risk of contamination from the trap flask with bacteria, viruses and infected particles. The suction microbiological filter is hydrophobic: with efficiency up to 99.9% it holds particles bigger than 0.027 micron, which are smaller then agents of Hepatitis A, B and C.

### Specifications:

Vacuum	–500 mbar
Trap flask's volume	1 litre
Dimensions (W × D × H)	160 × 210 × 340 mm
with trap flask	
Weight with trap flask, not more	1.5 kg
Input current/power consumption	n 12V, 300 mA / 3.6 W
External power supply Input A	AC 100-240 V 50/60Hz;
	Output DC 12V

# Catalogue number:

FTA-1	MA-040108-AAG
MA-8	MA-040108-BK





Optional 8-channel adapter manifold MA-8



