GW6010 – GW7010 – GW7015

GW6010: glassware washers with forced-air drying system. hinged door.	**GW7010**: Laboratory glassware washer, with forced-air drying system, sliding doors.	**GW7015**: Laboratory glassware washer, with forced-air drying system, sliding doors. [90 cm wide]

- PROGRAM TABLE – (GW)

WARNING

This document is an appendix to the appliance's user manual and must be consulted together with the manual for proper, safe use of the device.

It contains up-to-date information concerning the characteristics of the washing programs installed in the appliance.

Programs may vary depending on the firmware version installed in the appliance. If in doubt, have authorised staff check on the appliance that the installed version is the same as the version stated in the table at the back of this document.

ABBREVIATIONS USED IN THE TABLE

Demi, DW: demineralised water, the type of water used in a specific phase of the program.
Cold, CW: cold mains water, the type of water used in a specific phase of the program.
Hot, HW: hot mains water, the type of water used in a specific phase of the program.
K_TEST: indicates the predisposition in the phase of the "conductivity check" (active only if present and activated the option for the control of the water conductivity).
ID_prog: identity number of the washing program; it is not necessarily bonded to the program name. (E.g. the program " custom 1 " has ID_prog = 21).
Int.: "Intensive" – use this program to process dirty elements.
N.C.: "NOT CONTROLLED" - refers to the relatively short heating phases during which the heating elements are "on" but no target temperature value is set.
P1, ... P5: the code refers to the activation of the relative peristaltic pump, with dispensing of the liquid detergent associated to it. Each pump has a default dispensing rate set in the factory. **P1b, P2a**: the code refers to dispensing by pump P1, P2 at a rate different from the default rate, used in special cases, as specified in the program table.

PUMP DOSAGE ID.	DEFAULT DOSAGE LABORATORY PROGRAMS GLASSWARE WASHER GW [ml/litro]
P1	**5**
P1b	3
P2	**3**
P2a	4
P3	**10**
P4	**0.4**
P1(20), P2(20), P3(20), P4(20)	20 (dosage for service purpose only – peristaltic pump service program)

TD: thermal disinfection - phase during which the target temperature is kept above a target value for a specified time. The efficacy of the thermal disinfection process is indicated by means of parameter **A0**. In preset programs, the target value for a thermal disinfection process is always at least 80°C.
Temp. T [°C]: Target temperature of the current phase. The temperature inside the tank is kept constant around the specified value for the time shown in the table. The phase during which the temperature is held at the target value is called the **EXTENSION** phase. When no target temperature is indicated or the indication is ("0"), the heating elements are not activated (e.g. during a cold prewash or for cold rinses).

VARIOUS NOTES

WATER FILLING: at each step corresponds a load of water. The quantity are specified in the table.

GW6010, GW7010	GW7015
23 liters	32 liters

PHASE NUMBERING: the display of the machine, during the progression of the cycle, provides information on the various stages in progress. The first phase assumes the identity of "Phase 1", the second phase "Phase 2", etc.

CYCLE TIME: the stated time (on the display) for the complete cycle is completely indicative and refers to standard test conditions: intake water pressure 3bar, cold water temperature 25°C, electrical connection 3/N/PE 400V. Pressures and temperatures lower impact on cycle duration.

PARAMETER A_0

Parameter A_0 is used by product standard EN ISO 15883-1 to assign a numerical value to the thermal disinfection process.
It is calculated mathematically using the formula:

$$A_0 = \sum 10^{\left[(T-80)/z\right]} \times \Delta t$$

z = 10°C - *t* = duration of time interval considered in seconds - *T* = load temperature in °C.

When calculating the parameter, only the time intervals during which the temperature is above 65°C are considered.
For our thermal disinfection programs, the calculation is simplified by only including the "extension" phase, when the temperature is kept constant with reference to the target value set.

DRYING: Drying stage at the end of the cycle are present only on the models equipped with a drying system.

CHAMBER RECOVERY DRAIN: Only if installed the optional "WD-VDS6010": according to the default factory programs settings, the first two phases of the cycle are marked as "recovery drain" (potentially contaminated).

FACTORY AND CUSTOM PROGRAMS

Programs from n.1 to 20 (ID_prog from 1 to 20) are defined as Factory non-editable programs.
Custom programs: programs from n. 21 to 40 (ID_prog from 21 to 40) are predisposed to be personalized, with a maximum of n.10 washing phases.
The change can be made through the touch-screen interface of the device, using the updated firmware.
If parameters are modified from the default settings, a record should be kept of the various phases and the new program settings.

⚠️ *ATTENTION: The editing of a washing program requires specific knowledge in relation to the load-treatment process, and to the device parameters. For this reason, the function is protected by password.*
Always proceed according to the rules in force in the place of installation: a custom program, used to process the load, must be validated according to the standards and regulations applicable.
Consult the authorized technical service for clarification. Warning: when creating a custom program, do not include more than two thermal disinfection phases at 93°C for 10min.

SERVICE PROGRAMS

Programs **200, 201, 202, 203** are service programs, **not to be used for the processing of the load.**

LABORATORY – PROGRAM TABLE

ID_prog	Laboratory programs	Prewashing / Washing / NAOH washing			Washing / NAOH washing / Thermo disinfection			Neutralization			Mains rinsing			Demi rinsing			Rins. Demi hot			Drying phase		A0	Cycle time std 6010-7010 [min]	Cycle time std 7015 [min]
		H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	Temperature °C	Extension (min)			
1	1 Prewash GW	Cold	0	5																		-	10	12
2	2 Plastic	Cold	0	3	Cold	75	3	Hot	NC	3	Hot	NC	1	Demi	NC	1	Demi [K_TEST]	75	1	80	30	-	90	102
					P1			P2																
3	3 Glassware - quick				Hot	75	3	Hot	NC	2				Demi	NC	1	Demi [K_TEST]	75	1	80	30	-	70	78
					P1			P2																
4	4 Glassware - med.				Hot	75	5	Hot	NC	2				Demi	NC	1	Demi [K_TEST]	75	1	80	30	-	73	81
					P1			P2																
5	5 Glassware - std.				Hot	80	5	Hot	NC	2	Hot	NC	1	Demi	NC	1	Demi [K_TEST]	75	1	90	30	-	80	90
					P1			P2																
6	6 Glassware - int.	Hot	NC	3	Hot	90	3	Hot	NC	2	Hot	NC	1	Demi	NC	2	Demi [K_TEST]	75	1	100	30	1800	88	100
		P1			P1			P2[a]																
7	7 Glassware (blood)	Cold		3	Cold	93	3	Hot	NC	3	Hot	NC	1	Demi	NC	2	Demi [K_TEST]	75	1	100	30	3600	96	108
		P1			P1			P2																
8	8 Glassware AGAR	Hot	NC	3	Hot	93	3	Hot	NC	3	Hot	NC	1	Demi	NC	2	Demi [K_TEST]	75	1	100	30	3600	88	100
		P1			P1			P2																
9	9 AGAR Intensive	Hot	80	3	Hot	93	5	Hot	NC	2	Hot	NC	1	Demi	NC	2	Demi [K_TEST]	75	1	100	30	6000	96	108
		P1	P3	P4	P1	P3	P4	P2																
10	10 Thermal disin. GW 93°C 3'				Hot	93	3	Hot	NC	2				Demi	NC	2	Demi [K_TEST]	75	1	100	30	3600	80	88
					P1			P2																
11	11 Thermal disin. GW 93°C 10'				Hot	93	10	Hot	NC	2				Demi	NC	2	Demi [K_TEST]	75	1	100	30	12000	84	92
					P1			P2																
12	12 Thermal disin. GW int. 93°C 5'	Cold	NC	2	Cold	93	5	Hot	NC	2	Hot	NC	2	Demi	NC	1	Demi [K_TEST]	75	1	100	30	6000	97	109
		P1			P1			P2																
13	13 Thermal disin. GW int. 93°C 10'	Cold	NC	2	Cold	93	10	Hot	NC	2	Hot	NC	2	Demi	NC	1	Demi [K_TEST]	75	1	100	30	12000	101	113
		P1			P1			P2																
14	14 Stained Oil	Hot	NC	2	Hot	93	1	Hot	NC	2	Hot	NC	2	Demi	NC	1	Demi [K_TEST]	75	1	100	30	1200	83	95
					P1	P3	P4	P2																
15	15 Stained oil - int.	Hot	NC	2	Hot	93	5	Hot	NC	2	Hot	NC	2	Demi	NC	1	Demi [K_TEST]	75	1	100	30	6000	89	101
		P1[b]			P1	P3	P4	P2																
16	16 Oil grease	Hot	50	2	Hot	93	1	Hot	NC	2	Hot	NC	2	Demi	NC	1	Demi [K_TEST]	75	1	100	30	1200	94	106
		P1	P3	P4	P1	P3	P4	P2																
17	17 Mineral Oil	Hot	75	1	Hot	93	10	Hot	NC	2	Hot	NC	2	Demi	NC	1	Demi [K_TEST]	75	1	100	30	12000	107	119
		P1	P3	P4	P1	P3	P4	P2																

ID_prog	Laboratory programs	Prewashing / Washing / NAOH washing			Washing / NAOH washing / Thermo disinfection			Neutralization			Mains rinsing			Demi rinsing			Rins. Hot demi			Drying phase		A0	Cycle time std 6010-7010 [min]	Cycle time std 7015 [min]
		H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	Temperature °C	Extension (min)			
18	18 Petrol				Hot	93	5	Hot	NC	2	Hot	NC	2	Demi	NC	2	Demi [K_TEST]	75	1	100	30	6000	82	92
					P1 P3 P4			P2																
19	19 Diesel	Hot	NC	3	Hot	93	1	Hot	NC	2	Hot	NC	2	Demi	NC	2	Demi [K_TEST]	75	1	100	30	1200	95	107
		P1 P3 P4			P1 P3 P4			P2																
20	20 Universal Petrol	Hot	93	10	Hot	93	10	Hot	NC	2	Hot	NC	2	Demi	NC	1	Demi [K_TEST]	75	1	100	30	12000	123	135
		P1 P3 P4			P1 P3 P4			P2a																

CUSTOM PROGRAMS

On laboratory glassware washers, all the 20 pre-set custom programs have the same structure (as shown in the table below).

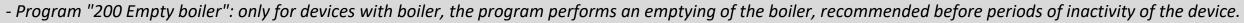| ID_prog	Custom: Program name	Prewashing / Washing / NAOH washing			Washing / NAOH washing / Thermo disinfection					Neutralization				Mains rinsing				Demi rinsing				Rins. Hot demi			Drying phase		Ao
		H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	Temperature °C	Extension (min)	H2O load	Temp °C	
21	Custom 1	DW (32)	-	1																					-	-	-
22	Custom 2	DW (32)	-	1																					-	-	-
23	Custom 3	DW (32)	-	1																					-	-	-
…	…	DW (32)	-	1																					-	-	…
40	Custom 20	DW (32)	-	1																					-	-	-

SERVICE PROGRAMS

ID_prog	Service Programs: Program name	Prewashing / Washing / NAOH washing			Washing / NAOH washing / Thermo disinfection					Neutralization			Mains rinsing			Demi rinsing			Rins. Hot demi			Drying phase		Ao	Cycle time std 6010-7010 [min]	Cycle time std 7015 [min]
		H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	H2O load	Temp °C	Extension (min)	Temperature °C	Extension (min)	H2O load	Temp °C			
200	Empty boiler																					-	-	-	-	-
201	Drying																					100	30	-	30	30
202	Service 1 (peristaltic pump test)				CW / P1(20)+P3(20)	-	0			CW / P2(20)	-	0				CW / P4(20)	-	0	DW	-	1	-	-	-	15	15
203	Probes calibration (TL, TCL)	DW	93	10																		90	10	-	31	33

Recommended use of the service programs:

- Program "200 Empty boiler": only for devices with boiler, the program performs an emptying of the boiler, recommended before periods of inactivity of the device.
- Program "201 Drying": performs a drying step in itself - to be used if the load drying was partial / not completely effective.
- Program "202 Service 1" It performs a loading of all installed peristaltic pumps - can be used to fill the circuit of detergents in case of first installation or to check the proper functioning of the peristaltic (detergents) pumps.
- Program "203 Probes calibration" to verify the good calibration of temperature probes in chamber.

Please note:

These programs can be disabled by the Superuser to facilitate the choice of the basic operator for the everyday programs.

CUSTOM PROGRAM RECORD TEMPLATE

Name	Phase 1			Phase 2			Phase 3			Phase 4			Phase 5			Phase 6			Phase 7			Phase 8			Phase 9			Phase 10			Drying		A0 value
	Water Filling	T target [°C]	Holding Time [min]	Water Filling	T target [°C]	Holding Time [min]	Water Filling	T target [°C]	Holding Time [min]	Water Filling	T target [°C]	Holding Time [min]	Water Filling	T target [°C]	Holding Time [min]	Water Filling	T target [°C]	Holding Time [min]	Water Filling	T target [°C]	Holding Time [min]	Water Filling	T target [°C]	Holding Time [min]	Water Filling	T target [°C]	Holding Time [min]	Water Filling	T target [°C]	Holding Time [min]	Drying Temperature [°C]	Holding Time [min]	

Doc.	rev.	Firmware Main	Date	Note
19 592 0349 – EN	05	GW6010, GW7010: Program set cod. 16812001305 Custom program set cod. 16813000002 GW7015: Program set cod. 16812002500 Custom program set cod. 16813000400	12/12/2018	GW7015 and conductivity check.
	04	Program set cod. 16 812 0013 **04**	18 / 01 / 2017	Ins. Cycle time.
	03	-	20 / 12 / 2016	GW7010.
	01	Program set cod. 16 812 0013 **03** Custom program set cod. 16 813 0000 00	22 / 11 / 2016	Table structured in three separate sets: 1. Factory (not editable) programs; 2. Custom programs; 3. Service Programs

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