

# SOFTENING



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Water passing through the layers of the ground gets rich of several mineral salts, making up the total salinity. The presence of some of these salts, such as Calcium and Magnesium, constitute the "water hardness", major cause of scale and damage to water systems, boilers, electric household appliances, valves and taps. If the water hardness is higher than 15°f (150 p.p.m.)\*, installing a softener is recommended. Through special synthetic resins the softener retains the dissolved calcium and magnesium salts, thus removing the excessive hardness.

The softener is the absolute solution to scale problems. Very easy to be installed and to be used, it is made up of a container for the resins, a container for the salt (necessary for the periodic regeneration of the resins), and a hydropneumatic valve controlled by a timer, carrying out the required regeneration cycles necessary to keep the appliance efficient.

\* 1°f = 10 p.p.m. - mg/l = 0,56°d = 0,70°GB





TIMER WITH TIME MODE (ET 500)



TIMER WITH VOLUME/TIME MODE (VT 1000 - 2000)

The softeners can be fitted with three different programmable timers which are innovative and very easy to be used:

- Timer ET 500 / ET 500 AD
- Timer VT 1000 / VT 1000 AD
- Timer VT 2000 / VT 2000 AD

The Timer **ET 500** carries out the regeneration with time mode, each "n" programmed days.

The Timers **VT 1000** and **VT 2000**, working on volume/time, carry out the regeneration each "n" days or before, if the water volume treated has already saturated the resins.

All GEL appliances have been designed and created with first quality materials in order to have the best performances, working within safety conditions.

The **AD** versions are fitted with a resin disinfection system and a special salt alarm device, checking the salt presence at the end of each regeneration, eventually indicating when salt is exhausted through a sound and visual alarm.

The **BPA** version of the **Timer VT 2000** controls a special **Automatic Mixing Valve** (GEL patent) which ensures the constant adjusting of the set hardness required at the outlet.

P.S. The mixing valve and the "AD" self-disinfection system are compulsory for domestic use in some countries.

Fig. 1 - Manual mixing valve

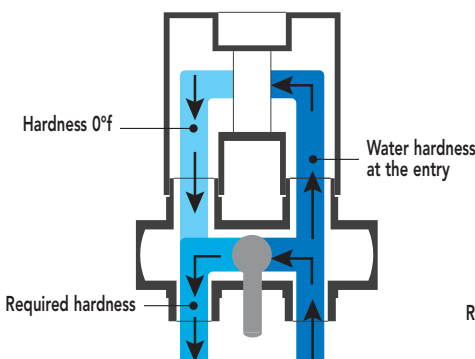
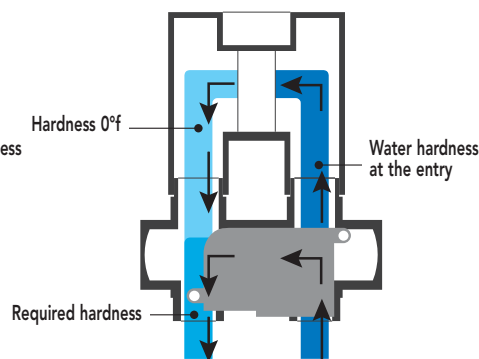


Fig. 2 - Automatic mixing valve



## WATER SOFTENERS: GUIDE TO THE CHOICE

### With vessels in fibreglass (for industrial systems with steel vessels see from page 42)

GEL water softeners can be divided into two groups:

- A) DECALUX and DECAL (table A) which do not supply softened water during regeneration (from 14 to 53 min.).
- B) DUPLEX (table B) supplying softened water 24 hours a day.

1) For domestic applications with potable use the softener is to be chosen by identifying the column of the "water hardness" of the water to be

treated and the "daily consumption m<sup>3</sup>".

If the value of the daily consumption is not known and the kind of house is known only: **flat** (150 l/day per person), **luxury house** (250 l/day per person), **villa** (400 l/day per person), identify in the corresponding column the number of resident people by approximating by excess.

Read in horizontal line on the left the identified model of water softener.

2) Once the softener model has been selected and assessed, choose the timer (see previous page) by taking into

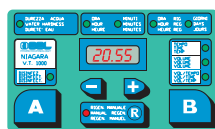
account that the volume/time timers (VT 1000 AD – VT 2000 AD) generally optimise water and salt consumptions compared to the timer with time control (ET 500 AD).

3) For models up to 200 litres, install the mixing valve. For models M and B and over 200 litres, build a mixing system from the plant engineering.

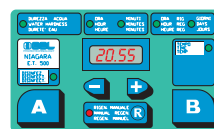
**P.S. Always check in the tables "TECHNICAL FEATURES" the data of operating and peak flow rate, and pressure loss of the chosen softener.**



TIMER VT 2000 AD



TIMER VT 1000 AD



TIMER ET 500 AD

**TABLE A - CHOICE OF DECAL AND DECALUX WATER SOFTENERS (domestic use)**

WATER SOFTENER	WATER HARDNESS																			
	20/29 °f						30/34 °f			35/39 °f			40/44 °f			45/50 °f				
	daily consumption m <sup>3</sup>	nr. people with			daily consumption m <sup>3</sup>	nr. people with			daily consumption m <sup>3</sup>	nr. people with			daily consumption m <sup>3</sup>	nr. people with			daily consumption m <sup>3</sup>	nr. people with		
		Flat	Luxury house	Villa		Flat	Luxury house	Villa		Flat	Luxury house	Villa		Flat	Luxury house	Villa		Flat	Luxury house	Villa
Decalux 5	1	S.P.	S.P.	S.P.	0,7	S.P.	S.P.	S.P.	0,6	S.P.	S.P.	S.P.	0,5	S.P.	S.P.	S.P.	0,4	S.P.	S.P.	S.P.
Decalux 10	2,1	14	8	5	1,5	10	6	3	1,2	8	4	3	1	6	4	2	0,8	5	3	2
Decal 15 Decalux 15	3,2	21	12	8	2,3	15	9	5	1,8	12	7	4	1,5	10	6	3	1,2	8	4	3
Decal 20 Decalux 20	4,2	28	16	10	3,1	20	12	7	2,5	16	10	6	2	13	8	5	1,7	11	6	4
Decal 25 Decalux 25	5,3	35	21	13	3,9	26	15	9	3,1	20	12	7	2,5	16	10	6	2,1	14	8	5
Decal 30 Decalux 30	6,4	42	25	16	4,7	31	18	11	3,7	24	14	9	3,1	20	12	7	2,5	16	10	6
Decal 45 Decalux 45	9,6	64	38	24	7,1	47	28	17	5,6	37	22	14	4,5	30	18	11	3,8	25	15	9
Decal 60 Decalux 60	12,8	85	51	32	9,4	62	37	23	7,5	50	30	18	6,2	41	24	15	5,1	34	20	12
Decal 75	16	106	64	40	11,8	78	47	29	9,3	62	37	23	7,7	51	30	19	6,4	42	25	16
Decal 110* Decal 110 M*	23,5	156	94	58	17,3	115	69	43	13,7	91	54	34	11,3	75	45	28	9,4	62	37	23
Decal 140* Decal 140 M*	30	200	120	75	22,1	147	88	55	17,5	116	70	43	14,4	96	57	36	12	80	48	30
Decal 200* Decal 200 M* Decal 200 B*	42,8	285	171	107	31,5	210	126	78	25	166	100	62	20,6	137	82	51	17,1	114	68	42
Decal 250 M* Decal 250 B*	53,5	356	214	133	39,4	262	157	98	31,2	208	124	78	25,8	172	103	64	21,4	142	85	53
Decal 320 B	68,5	456	274	171	50,5	336	202	126	40	266	160	100	33,1	220	132	82	27,4	182	109	68
Decal 500 B	107,1	714	428	267	78,9	526	315	197	62,5	416	250	156	51,7	344	206	129	42,8	285	171	107

\* Choose the normal, M or B version. The choice between the normal, M and B version depends on the peak flow rate.

S.P. - Indicated for a single point of use.

**P.S.** The tables above have been worked out by considering a residual hardness of 15°f and a regeneration every 2 days.

TABLE B – CHOICE OF DUPLEX WATER SOFTENERS (domestic use)

WATER SOFTENER	WATER HARDNESS																			
	20/29 °f				30/34 °f				35/39 °f				40/44 °f				45/50 °f			
	daily consumption m <sup>3</sup>	nr. people with			daily consumption m <sup>3</sup>	nr. people with			daily consumption m <sup>3</sup>	nr. people with			daily consumption m <sup>3</sup>	nr. people with			daily consumption m <sup>3</sup>	nr. people with		
		Flat	Luxury house	Villa		Flat	Luxury house	Villa		Flat	Luxury house	Villa		Flat	Luxury house	Villa		Flat	Luxury house	Villa
	▼				▼				▼				▼				▼			
Duplex 15+15	6,4	42	25	16	4,6	30	18	11	3,6	24	14	9	3	20	12	7	2,4	16	9	6
Duplex 20+20	8,4	56	33	21	6,2	41	24	15	5	33	20	12	4	26	16	10	3,4	22	13	8
Duplex 25+25	10,6	70	42	26	7,8	52	31	19	6,2	41	24	15	5	33	20	10	4,2	28	16	10
Duplex 30+30	12,8	85	51	32	9,4	62	37	23	7,4	49	29	18	6,2	41	24	15	5	33	20	12
Duplex 45+45	19,2	128	76	48	14,2	94	56	35	11,2	74	44	28	9	60	36	22	7,6	50	30	19
Duplex 60+60	25,6	170	102	64	18,8	125	75	47	15	100	60	37	12,4	82	49	31	10,2	68	40	25
Duplex 75+75	32	213	128	80	23,6	157	94	59	18,6	124	74	46	15,4	102	61	38	12,8	85	51	32
Duplex 110+110* Duplex 110+110 M*	47	313	188	117	34,6	230	138	86	27,4	182	109	68	22,6	150	90	56	18,8	125	75	47
Duplex 140+140* Duplex 140+140 M*	60	400	240	150	44,2	294	176	110	35	233	140	87	28,8	192	115	72	24	160	96	60
Duplex 200+200* Duplex 200+200 M* Duplex 200+200 B*	85,6	570	342	214	63	420	252	157	50	333	200	125	41,2	274	164	103	34,2	228	136	85
Duplex 250+250 M* Duplex 250+250 B*	107	713	428	267	78,8	525	315	197	62,4	416	249	156	51,6	344	206	129	42,8	285	171	107
Duplex 320+320 B	137	913	548	342	101	673	404	252	80	533	320	200	66,2	441	264	165	54,8	365	219	137
Duplex 500+500 B	214,2	1428	856	535	157,8	1052	631	394	125	833	500	312	103,4	689	413	258	85,6	570	342	214

\* Choose the normal, M or B version. The choice between the normal, M and B version depends on the peak flow rate.  
**P.S.** The tables above have been worked out by considering a residual hardness of 15°f and a regeneration every 2 days.

## Water softeners with Timer ET 500

The Decalux and Decal water softeners equipped with the electronic Timer ET 500 control the regeneration by **time**. Programming is carried out by entering some simple data, like water hardness, correct time, frequency of regeneration and time required for the regeneration to take place.

During the operation stage, the time can be read on the display but it is also possible to check the stored data and the volume of water the softener can treat.

During the regeneration the display shows the stage that is being carried out. In addition, a key allows a manual regeneration whenever required, enabling the normal operation to be over-riden for a quick post-installation test.

The ET 500 "AD" version is equipped with a **resin disinfection system** and a special **salt alarm** device checking the salt level at the end of each regeneration, eventually indicating when salt is exhausted through a sound and visual alarm.

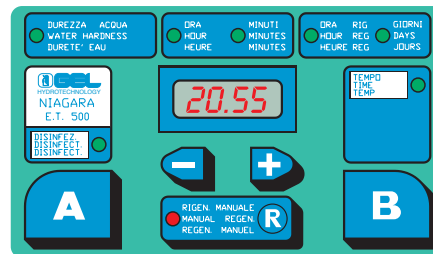
The timer ET 500 is protected against sudden changes of voltage by fuses placed inside the transformer and in case of a power cut, it will keep the programmed data in memory unaltered.



DECALUX ET 500 AD Monobloc



DECAL ET 500 AD Twin-body



TIMER ET 500 AD

- In a few words:**
- Hydropneumatic valve
  - Electronic Timer ET 500
  - Regeneration controlled by time
  - AD self-disinfection system
  - Salt alarm

### DECALUX ET 500

Model Code	Decalux 5 ET 500 109.700.20	Decalux 5 ET 500 AD AD9.700.20	Decalux 10 ET 500 109.715.20	Decalux 10 ET 500 AD AD9.715.20	Decalux 15 ET 500 109.720.20	Decalux 15 ET 500 AD AD9.720.20
Model Code	Decalux 20 ET 500 109.725.20	Decalux 20 ET 500 AD AD9.725.20	Decalux 25 ET 500 109.730.20	Decalux 25 ET 500 AD AD9.730.20	Decalux 30 ET 500 109.735.20	Decalux 30 ET 500 AD AD9.735.20
Model Code	Decalux 45 ET 500 109.745.20	Decalux 45 ET 500 AD AD9.745.20	Decalux 60 ET 500 109.750.20	Decalux 60 ET 500 AD AD9.750.20		

### DECAL ET 500

Model Code	Decal 15 ET 500 109.810.20	Decal 15 ET 500 AD AD9.810.20	Decal 20 ET 500 109.815.20	Decal 20 ET 500 AD AD9.815.20	Decal 25 ET 500 109.820.20	Decal 25 ET 500 AD AD9.820.20
Model Code	Decal 30 ET 500 109.825.20	Decal 30 ET 500 AD AD9.825.20	Decal 45 ET 500 109.835.20	Decal 45 ET 500 AD AD9.835.20	Decal 60 ET 500 109.840.20	Decal 60 ET 500 AD AD9.840.20
Model Code	Decal 75 ET 500 109.845.20	Decal 75 ET 500 AD AD9.845.20	Decal 110 ET 500 109.850.20	Decal 110 ET 500 AD AD9.850.20	Decal 110/M ET 500 109.852.20	Decal 110/M ET 500 AD AD9.852.20
Model Code	Decal 140 ET 500 109.855.20	Decal 140 ET 500 AD AD9.855.20	Decal 140/M ET 500 109.857.20	Decal 140/M ET 500 AD AD9.857.20	Decal 200 ET 500 109.860.20	Decal 200 ET 500 AD AD9.860.20
Model Code	Decal 200/M ET 500 109.860.60	Decal 200/M ET 500 AD AD9.860.60	Decal 200/B ET 500 109.861.20	Decal 200/B ET 500 AD AD9.861.20	Decal 250/M ET 500 109.863.20	Decal 250/M ET 500 AD AD9.863.20
Model Code	Decal 250/B ET 500 109.862.20	Decal 250/B ET 500 AD AD9.862.20	Decal 320/B ET 500 109.865.20	Decal 320/B ET 500 AD AD9.865.20	Decal 500/B ET 500 109.870.20	Decal 500/B ET 500 AD AD9.870.20

# DECALUX - DECAL VT 1000

CE



DECALUX VT 1000 AD Monobloc



DECAL VT 1000 AD Twin-body

## Water softeners with Timer VT 1000

The Decalux and Decal water softeners equipped with the electronic Timer VT 1000 can control regeneration by: **time, volume, volume/time**.

Programming is carried out by entering some simple data like water hardness, correct time, frequency of regeneration, time of regeneration and selecting the **working mode required (time, volume\*, volume/time)**.

During the operation stage, the time can be read on the display but it is also possible to check the stored data, the volume of water the softener can treat and the litres of water already treated. During the regeneration the display shows the stage that is being carried out. In addition, a key allows a manual regeneration whenever required, enabling the normal operation to be over-ridden for a quick post-installation test.

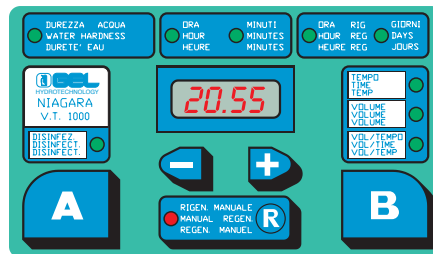
The "AD" version is equipped with a **resin disinfection system** and a special **salt alarm** device checking the salt level at the end of each regeneration, eventually indicating when salt is exhausted through a sound and visual alarm.

The timer VT 1000 is protected against sudden changes of voltage by fuses placed inside the transformer and in case of a power cut, it will keep the programmed data in memory unaltered.

\* Pure or with regeneration time.

### In a few words:

Hydropneumatic valve  
Electronic Timer VT 1000  
Regeneration controlled by time, by volume, by volume/time  
- AD self-disinfection system  
- Salt alarm



TIMER VT 1000 AD

### DECALUX VT 1000

Model Code	Decalux 5 VT 1000 109.700.30	Decalux 5 VT 1000 AD AD9.700.30	Decalux 10 VT 1000 109.715.30	Decalux 10 VT 1000 AD AD9.715.30	Decalux 15 VT 1000 109.720.30	Decalux 15 VT 1000 AD AD9.720.30
Model Code	Decalux 20 VT 1000 109.725.30	Decalux 20 VT 1000 AD AD9.725.30	Decalux 25 VT 1000 109.730.30	Decalux 25 VT 1000 AD AD9.730.30	Decalux 30 VT 1000 109.735.30	Decalux 30 VT 1000 AD AD9.735.30
Model Code	Decalux 45 VT 1000 109.745.30	Decalux 45 VT 1000 AD AD9.745.30	Decalux 60 VT 1000 109.750.30	Decalux 60 VT 1000 AD AD9.750.30		

### DECAL VT 1000

Model Code	Decal 15 VT 1000 109.810.30	Decal 15 VT 1000 AD AD9.810.30	Decal 20 VT 1000 109.815.30	Decal 20 VT 1000 AD AD9.815.30	Decal 25 VT 1000 109.820.30	Decal 25 VT 1000 AD AD9.820.30
Model Code	Decal 30 VT 1000 109.825.30	Decal 30 VT 1000 AD AD9.825.30	Decal 45 VT 1000 109.835.30	Decal 45 VT 1000 AD AD9.835.30	Decal 60 VT 1000 109.840.30	Decal 60 VT 1000 AD AD9.840.30
Model Code	Decal 75 VT 1000 109.845.30	Decal 75 VT 1000 AD AD9.845.30	Decal 110 VT 1000 109.850.30	Decal 110 VT 1000 AD AD9.850.30	Decal 110/M VT 1000 109.852.30	Decal 110/M VT 1000 AD AD9.852.30
Model Code	Decal 140 VT 1000 109.855.30	Decal 140 VT 1000 AD AD9.855.30	Decal 140/M VT 1000 109.857.30	Decal 140/M VT 1000 AD AD9.857.30	Decal 200 VT 1000 109.860.30	Decal 200 VT 1000 AD AD9.860.30
Model Code	Decal 200/M VT 1000 109.860.70	Decal 200/M VT 1000 AD AD9.860.70	Decal 200/B VT 1000 109.861.30	Decal 200/B VT 1000 AD AD9.861.30	Decal 250/M VT 1000 109.863.30	Decal 250/M VT 1000 AD AD9.863.30
Model Code	Decal 250/B VT 1000 109.862.30	Decal 250/B VT 1000 AD AD9.862.30	Decal 320/B VT 1000 109.865.30	Decal 320/B VT 1000 AD AD9.865.30	Decal 500/B VT 1000 109.870.30	Decal 500/B VT 1000 AD AD9.870.30

## Water softeners with Timer VT 2000

The Decalux and Decal water softeners equipped with the electronic Timer VT 2000 are the most highly developed models of the range. The timer is a real compact computer and guides the user by giving simple and clear instructions for personalizing the programming of regeneration.

Programming is carried out by entering some simple data like water hardness, correct time, frequency of regeneration, time of regeneration and selecting the **working mode required (volume, volume/time)**.

The instructions can be directly read on the LCD display and it is also possible to read the flow rate per hour required, the volume of water the softener can treat and the litres of water already treated. A visual alarm will advise if the required flow rate is higher than the softening capacity of the unit.

During the operation stage, the time and the stored data can be seen on the display of the timer. During the regeneration the display shows the stage that is being carried out and its duration expressed in minutes. In addition, a key allows a manual regeneration whenever required, enabling the normal operation to be over-ridden for a quick post-installation test.

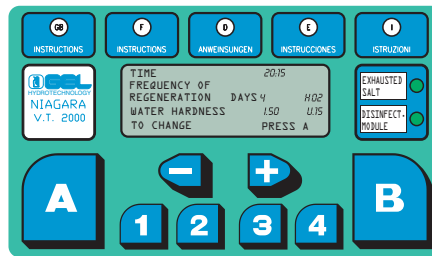
The timer VT 2000 is protected against sudden changes of voltage by fuses placed inside the transformer and in



DECALUX VT 2000 AD Monobloc



DECAL VT 2000 AD Twin-body



TIMER VT 2000 AD

### In a few words:

- Hydropneumatic valve
- Electronic Timer VT 2000
- LCD Display writing in 5 languages
- Regeneration controlled by volume, volume/time
- AD self-disinfection system
- Salt alarm
- BPA\* automatic mixing valve

case of a power cut, it will keep the programmed data in memory unaltered. The timer VT 2000 (in the BPA version) can control the special automatic mixing valve (GEL patent) which ensures the constant adjusting of the set hardness required at the outlet.

### DECALUX VT 2000

Model Code	Decalux 5 VT 2000 109.700.40	Decalux 5 VT 2000 AD AD9.700.40	Decalux 10 VT 2000 109.715.40	Decalux 10 VT 2000 AD AD9.715.40	Decalux 15 VT 2000 109.720.40	Decalux 15 VT 2000 AD AD9.720.40
Model Code	Decalux 20 VT 2000 109.725.40	Decalux 20 VT 2000 AD AD9.725.40	Decalux 25 VT 2000 109.730.40	Decalux 25 VT 2000 AD AD9.730.40	Decalux 30 VT 2000 109.735.40	Decalux 30 VT 2000 AD AD9.735.40
Model Code	Decalux 45 VT 2000 109.745.40	Decalux 45 VT 2000 AD AD9.745.40	Decalux 60 VT 2000 109.750.40	Decalux 60 VT 2000 AD AD9.750.40		

### DECAL VT 2000

Model Code	Decal 15 VT 2000 109.810.40	Decal 15 VT 2000 AD AD9.810.40	Decal 20 VT 2000 109.815.40	Decal 20 VT 2000 AD AD9.815.40	Decal 25 VT 2000 109.820.40	Decal 25 VT 2000 AD AD9.820.40
Model Code	Decal 30 VT 2000 109.825.40	Decal 30 VT 2000 AD AD9.825.40	Decal 45 VT 2000 109.835.40	Decal 45 VT 2000 AD AD9.835.40	Decal 60 VT 2000 109.840.40	Decal 60 VT 2000 AD AD9.840.40
Model Code	Decal 75 VT 2000 109.845.40	Decal 75 VT 2000 AD AD9.845.40	Decal 110 VT 2000 109.850.40	Decal 110 VT 2000 AD AD9.850.40	Decal 110/M VT 2000 109.852.40	Decal 110/M VT 2000 AD AD9.852.40
Model Code	Decal 140 VT 2000 109.855.40	Decal 140 VT 2000 AD AD9.855.40	Decal 140/M VT 2000 109.857.40	Decal 140/M VT 2000 AD AD9.857.40	Decal 200 VT 2000 109.860.40	Decal 200 VT 2000 AD AD9.860.40
Model Code	Decal 200/M VT 2000 109.860.80	Decal 200/M VT 2000 AD AD9.860.80	Decal 200/B VT 2000 109.861.40	Decal 200/B VT 2000 AD AD9.861.40	Decal 250/M VT 2000 109.863.40	Decal 250/M VT 2000 AD AD9.863.40
Model Code	Decal 250/B VT 2000 109.862.40	Decal 250/B VT 2000 AD AD9.862.40	Decal 320/B VT 2000 109.865.40	Decal 320/B VT 2000 AD AD9.865.40	Decal 500/B VT 2000 109.870.40	Decal 500/B VT 2000 AD AD9.870.40

\* Specify in the order: VT 2000 BPA by replacing the last number of the code with "X".



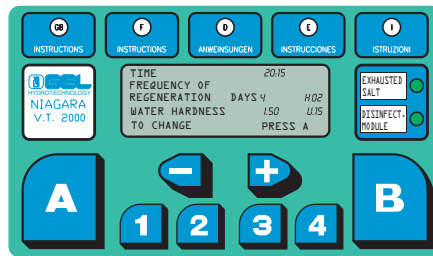
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DUPLEX VT 2000 AD

**In a few words:**

- Hydropneumatic valves
- Electronic Timers VT 2000 Duplex
- LCD Display writing in 5 languages
- Regeneration controlled by volume, volume/time
- AD self-disinfection system
- Salt alarm
- Softened water even during regeneration



TIMER VT 2000 AD

## DUPLEX VT 2000

### Duplex water softeners with Timer VT 2000

Duplex water softeners are made up of two vessels containing resins, controlled by the electronic timer VT 2000, which alternates the operation of the vessels to supply **softened water** even **during regeneration**.

Programming is carried out by entering the value of water hardness and correct time. On the display it is possible at any time to follow the instructions, read the flow rate per hour required or the volume of water the softener can treat and the litres of water already treated.

It is important to underline the possibility of having high peak flow rates, since the timer, once analysed the required volume of water, enables both vessels to operate at the same time. As soon as the required flow rate comes back to normal values, the system will close the second vessel.

The version Duplex VT 2000 AD model is fitted with a **resin disinfection system** and a special **salt alarm** device checking the salt level at the end of each regeneration, eventually indicating when salt is exhausted through a sound and visual alarm.

The timer VT 2000 is protected against sudden changes of voltage by fuses placed inside the transformer and in case of a power cut, it will keep the programmed data in memory unaltered.

The timer VT 2000 indicates on the LCD display when resins have to be changed.

### DUPLEX VT 2000

<b>Model Code</b>	Duplex 15+15 VT 2000 109.915.40	Duplex 15+15 VT 2000 AD AD9.915.40	Duplex 20+20 VT 2000 109.920.40	Duplex 20+20 VT 2000 AD AD9.920.40	Duplex 25+25 VT 2000 109.925.40	Duplex 25+25 VT 2000 AD AD9.925.40
<b>Model Code</b>	Duplex 30+30 VT 2000 109.930.40	Duplex 30+30 VT 2000 AD AD9.930.40	Duplex 45+45 VT 2000 109.945.40	Duplex 45+45 VT 2000 AD AD9.945.40	Duplex 60+60 VT 2000 109.960.40	Duplex 60+60 VT 2000 AD AD9.960.40
<b>Model Code</b>	Duplex 75+75 VT 2000 109.975.40	Duplex 75+75 VT 2000 AD AD9.975.40	Duplex 110+110 VT 2000 109.980.40	Duplex 110+110 VT 2000 AD AD9.980.40	Duplex 110+110/M VT 2000 109.982.40	Duplex 110/B+110/M VT 2000 AD AD9.982.40
<b>Model Code</b>	Duplex 140+140 VT 2000 109.985.40	Duplex 140+140 VT 2000 AD AD9.985.40	Duplex 140/M+140/M VT 2000 109.987.40	Duplex 140/M+140/M VT 2000 AD AD9.987.40	Duplex 200+200 VT 2000 109.990.40	Duplex 200+200 VT 2000 AD AD9.990.40
<b>Model Code</b>	Duplex 200/M+200/M VT 2000 109.990.80	Duplex 200/M+200/M VT 2000 AD AD9.990.80	Duplex 200/B+200/B VT 2000 109.991.40	Duplex 200/B+200/B VT 2000 AD AD9.991.40	Duplex 250/M+250/M VT 2000 109.991.60	Duplex 250/M+250/M VT 2000 AD AD9.991.60
<b>Model Code</b>	Duplex 250/B+250/B VT 2000 109.991.80	Duplex 250/B+250/B VT 2000 AD AD9.991.80	Duplex 320/B+320/B VT 2000 109.992.40	Duplex 320/B+320/B VT 2000 AD AD9.992.40	Duplex 500/B+500/B VT 2000 109.994.40	Duplex 500/B+500/B VT 2000 AD AD9.994.40

## SALT PR

### Recrystallised regenerating salt in tablets

Recrystallised salt in **tablets** of very fine purity. It allows to considerably reduce ordinary maintenance of softeners.

#### TECHNICAL FEATURES

Physical form	crystalline tablets
Specific weight	2,16 Kg/dm <sup>3</sup>
Colour	colourless
Content in Na Cl	99,8%
Insoluble subst. in water	500 mg/kg max
Package	10 Kg and 25 Kg sacks
Packaging	single sack pallet with 54 sacks



## SALT P

### Regenerating salt in tablets

Pure rock salt in **tablets**, for carrying out the regeneration of the softener resins.

#### TECHNICAL FEATURES

Physical form	crystalline tablets
Specific weight	2,16 Kg/dm <sup>3</sup>
Colour	colourless
Content in Na Cl	99,4%
Insoluble subst. in water	2000 mg/kg max
Package	25 Kg sacks
Packaging	single sack pallet with 54 sacks



## SALT G

### Regenerating salt in crystals

Pure rock salt in **crystals**, for carrying out the regeneration of the softener resins.

#### TECHNICAL FEATURES

Physical form	crystalline
Specific weight	1,16 Kg/dm <sup>3</sup>
Colour	colourless
Content in Na Cl	99,4%
Insoluble subst. in water	2000 mg/kg max
Package	25 Kg sacks
Packaging	single sack pallet with 54 sacks



#### REGENERATING SALT

<b>Model Code</b>	Salt PR 10 Kg (sack) <b>410.600.48</b>	Salt PR 10 Kg (pallet with 96 sacks) <b>107.038.20</b>	Salt PR 25 Kg (sack) <b>410.600.44</b>	Salt PR 25 Kg (pallet with 54 sacks) <b>107.038.40</b>
<b>Model Code</b>	Salt P 25 Kg (sack) <b>410.600.45</b>	Salt P 25 Kg (pallet with 54 sacks) <b>107.038.00</b>	Salt G 25 Kg (sack) <b>410.600.35</b>	Salt G 25 Kg (pallet with 54 sacks) <b>107.038.60</b>

## TECHNICAL FEATURES

Ratiomotor	6168/0,16 r.p.m.
Power supply	230/12 V
Connections	1 1/2"m
Thread adaptors (included)	1 1/2"f - 1"m

**P.S.** Suitable for DECAL, DECALUX, VT 2000 BPA up to the model 200, M and B models excluded.



## AUTOMATIC MIXING VALVE

The Automatic mixing valve allows to adjust the residual hardness desired without the presence of an operator since it is completely controlled by the timer VT 2000 BPA which adjusts it according to the stored data and the flow rate required.

## TECHNICAL FEATURES

Connections	1 1/2"m
Thread adaptors (included)	1 1/2"f - 1"m

**P.S.** Suitable for DECAL, DECALUX, up to the model 200, M and B models excluded.



## MANUAL MIXING VALVE

The Manual mixing valve allows to adjust the residual hardness desired by acting on the special lever.

## TECHNICAL FEATURES

Thread adaptors for softeners up to 200 l., M and B models excluded.	1 1/2"f - 3/4"m
Thread adaptors for softeners model M	2"f - 1 1/2"m
Thread adaptors for softeners model B	2 1/4"f - 2"m



## THREAD ADAPTORS

## TECHNICAL FEATURES

Chlorine production	Adjustable
Power supply	230/14 V/2-6V



## DISINFECTION SYSTEM

The gearcase "Disinfection System", very easy to be installed, is an important accessory for the disinfection of the resins, if required (up to 300 litres of resin).



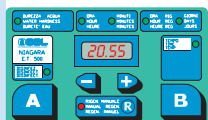
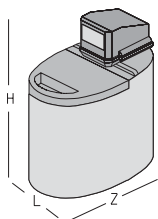
## HARDNESS KIT

The kit consists in a test tube and two small bottles containing the titrating solution for measuring the hardness value. Very easy to be used.

## ACCESSORIES

<b>Model Code</b>	Automatic mixing valve <b>109.200.50</b>	Manual mixing valve <b>109.201.00</b>	Disinfection System <b>109.200.30</b>	Hardness kit <b>471.000.15</b>
<b>Model Code</b>	Thread adaptors 1 1/2"f - 3/4"m <b>109.200.12</b>	Thread adaptors 2"f - 1 1/2"m <b>109.200.14</b>	Thread adaptors 2 1/4"f - 2"m <b>109.200.15</b>	

## TECHNICAL FEATURES



### ET 500

Electronic timer  
Regeneration  
controlled by time  
- AD self-disinfection  
system  
Salt alarm

DECALUX ET 500													
Model (l)	Connect. (")	Cyclic capacity (m <sup>3</sup> x1 <sup>°f</sup> )	Flow rate pot. use			Flow rate tech. use			Capacity salt cont. (l)	Salt per regen. (Kg)	Duration of regen. (min.)	Weight (kg)	Dimensions LxHxZ (cm)
			operation (l/h)	OP (bar)	peak (l/min)*	operation (l/h)	OP (bar)	peak (l/min)*					
5	1 1/4"	30	300	<0,5	8	50	<0,5	1	35	0,75	14	16	34x55x50
10	1 1/4"	60	600	<0,5	16	100	<0,5	2	70	1,5	26	28	40x78x60
15	1 1/4"	90	900	<0,5	24	150	<0,5	3	135	2,25	22	36	40x111x60
20	1 1/4"	120	1200	<0,5	32	200	<0,5	4	125	3,00	29	43	40x111x60
25	1 1/4"	150	1500	<0,5	40	250	<0,5	5	120	3,75	36	43	40x111x60
30	1 1/4"	180	1800	<0,5	48	300	<0,5	6	115	4,50	43	53	40x111x60
45	1 1/4"	270	2250	<0,5	60	450	<0,5	8	220	6,75	36	82	50x134x70
60	1 1/4"	360	3000	<0,6	81	600	<0,5	11	200	9,00	33	90	50x134x70



### VT 1000

Electronic timer  
Regeneration  
controlled by time,  
by volume,  
by volume/time  
- AD self-disinfection  
system  
Salt alarm

DECALUX VT 1000													
Model (l)	Connect. (")	Cyclic capacity (m <sup>3</sup> x1 <sup>°f</sup> )	Flow rate pot. use			Flow rate tech. use			Capacity salt cont. (l)	Salt per regen. (Kg)	Duration of regen. (min.)	Weight (kg)	Dimensions LxHxZ (cm)
			operation (l/h)	OP (bar)	peak (l/min)*	operation (l/h)	OP (bar)	peak (l/min)*					
5	1 1/4"	30	300	<0,5	8	50	<0,5	1	35	0,75	14	16	34x55x50
10	1 1/4"	60	600	<0,5	16	100	<0,5	2	70	1,5	26	28	40x78x60
15	1 1/4"	90	900	<0,5	24	150	<0,5	3	135	2,25	22	36	40x111x60
20	1 1/4"	120	1200	<0,5	32	200	<0,5	4	125	3,00	29	43	40x111x60
25	1 1/4"	150	1500	<0,5	40	250	<0,5	5	120	3,75	36	43	40x111x60
30	1 1/4"	180	1800	<0,5	48	300	<0,5	6	115	4,50	43	53	40x111x60
45	1 1/4"	270	2250	<0,5	60	450	<0,5	8	220	6,75	36	82	50x134x70
60	1 1/4"	360	3000	<0,6	81	600	<0,5	11	200	9,00	33	90	50x134x70



### VT 2000

Electronic timer  
Regeneration  
controlled by volume,  
by volume/time  
- AD self-disinfection  
system  
Salt alarm  
- BPA\*\* Automatic  
mixing valve

DECALUX VT 2000													
Model (l)	Connect. (")	Cyclic capacity (m <sup>3</sup> x1 <sup>°f</sup> )	Flow rate pot. use			Flow rate tech. use			Capacity salt cont. (l)	Salt per regen. (Kg)	Duration of regen. (min.)	Weight (kg)	Dimensions LxHxZ (cm)
			operation (l/h)	OP (bar)	peak (l/min)*	operation (l/h)	OP (bar)	peak (l/min)*					
5	1 1/4"	30	300	<0,5	8	50	<0,5	1	35	0,75	14	16	34x55x50
10	1 1/4"	60	600	<0,5	16	100	<0,5	2	70	1,5	26	28	40x78x60
15	1 1/4"	90	900	<0,5	24	150	<0,5	3	135	2,25	22	36	40x111x60
20	1 1/4"	120	1200	<0,5	32	200	<0,5	4	125	3,00	29	43	40x111x60
25	1 1/4"	150	1500	<0,5	40	250	<0,5	5	120	3,75	36	43	40x111x60
30	1 1/4"	180	1800	<0,5	48	300	<0,5	6	115	4,50	43	53	40x111x60
45	1 1/4"	270	2250	<0,5	60	450	<0,5	8	220	6,75	36	82	50x134x70
60	1 1/4"	360	3000	<0,6	81	600	<0,5	11	200	9,00	33	90	50x134x70

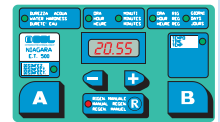
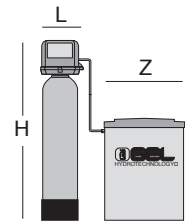
\* It can be delivered for some minutes only.

\*\* Specify in the order: VT 2000 BPA by replacing the last number of the code with "X".

P.S. For all the models: pressure 2 - 6 bar, water temperature 5° - 30°C (41°-86°F). Electrical absorption: 12 VA. The data of flow rate and cyclic capacity are referred to a water with max. hardness of 30°f, max. salinity of 650 µS and temperature of 25° C (77°F).

## DECAL ET 500

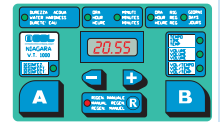
Model (l)	Connect. (")	Cyclic capacity (m <sup>3</sup> x1 <sup>°</sup> f)	Flow rate pot. use			Flow rate tech. use			Capacity salt cont. (l)	Salt per regen. (Kg)	Duration of regen. (min.)	Weight (kg)	Dimensions LxHxZ (cm)
			operation (l/h)	OP (bar)	peak (l/min)*	operation (l/h)	OP (bar)	peak (l/min)*					
15	1 1/4"	90	900	<0,5	24	150	<0,5	3	100	2,25	22	33	24x111x47
20	1 1/4"	120	1200	<0,5	32	200	<0,5	4	100	3,00	29	37	24x111x47
25	1 1/4"	150	1500	<0,5	40	250	<0,5	5	100	3,75	36	46	25x111x47
30	1 1/4"	180	1800	<0,5	48	300	<0,5	6	100	4,50	43	53	25x111x47
45	1 1/4"	270	2250	<0,5	60	450	<0,5	8	100	6,75	36	71	25x159x47
60	1 1/4"	360	3000	<0,6	81	600	<0,5	11	150	9,00	33	83	33x134x53
75	1 1/4"	450	3750	<0,7	101	750	<0,5	14	150	11,25	41	98	33x159x53
110	1 1/4"	660	4400	<0,8	117	1100	<0,5	20	200	16,50	47	155	37x186x53
110/M	2"	660	4400	<0,6	120	1100	<0,5	20	200	16,50	41	155	37x190x53
140	1 1/4"	840	5600	<0,9	117	1400	<0,5	26	200	21,00	59	183	41x186x53
140/M	2"	840	5600	<0,7	151	1400	<0,5	26	200	21,00	51	183	41x190x53
200	1 1/4"	1200	7000	<1,2	117	2000	<0,5	37	300	30,00	84	280	56x183x71
200/M	2"	1200	7000	<1,0	160	2000	<0,5	37	300	30,00	73	280	56x187x71
200/B	2"	1200	7000	<0,8	188	2000	<0,5	37	300	30,00	66	280	56x197x71
250/M	2"	1500	8750	<1,2	160	2500	<0,5	46	520	37,5	91	420	61x225x90
250/B	2"	1500	8750	<0,9	235	2500	<0,5	46	520	37,5	34	420	61x235x90
320/B	2"	1920	9600	<0,7	258	3200	<0,5	59	520	48,00	38	490	61x235x91
500/B	2"	3000	15000	<0,9	350	5000	<0,5	93	850	75,00	53	653	77x237x109

**ET 500**

Electronic timer  
Regeneration  
controlled by time  
- AD self-disinfection  
system  
Salt alarm

## DECAL VT 1000

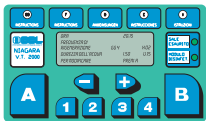
Model (l)	Connect. (")	Cyclic capacity (m <sup>3</sup> x1 <sup>°</sup> f)	Flow rate pot. use			Flow rate tech. use			Capacity salt cont. (l)	Salt per regen. (Kg)	Duration of regen. (min.)	Weight (kg)	Dimensions LxHxZ (cm)
			operation (l/h)	OP (bar)	peak (l/min)*	operation (l/h)	OP (bar)	peak (l/min)*					
15	1 1/4"	90	900	<0,5	24	150	<0,5	3	100	2,25	22	33	24x111x47
20	1 1/4"	120	1200	<0,5	32	200	<0,5	4	100	3,00	29	37	24x111x47
25	1 1/4"	150	1500	<0,5	40	250	<0,5	5	100	3,75	36	46	25x111x47
30	1 1/4"	180	1800	<0,5	48	300	<0,5	6	100	4,50	43	53	25x111x47
45	1 1/4"	270	2250	<0,5	60	450	<0,5	8	100	6,75	36	71	25x159x47
60	1 1/4"	360	3000	<0,6	81	600	<0,5	11	150	9,00	33	83	33x134x53
75	1 1/4"	450	3750	<0,7	101	750	<0,5	14	150	11,25	41	98	33x159x53
110	1 1/4"	660	4400	<0,8	117	1100	<0,5	20	200	16,50	47	155	37x186x53
110/M	2"	660	4400	<0,6	120	1100	<0,5	20	200	16,50	41	155	37x190x53
140	1 1/4"	840	5600	<0,9	117	1400	<0,5	26	200	21,00	59	183	41x186x53
140/M	2"	840	5600	<0,7	151	1400	<0,5	26	200	21,00	51	183	41x190x53
200	1 1/4"	1200	7000	<1,2	117	2000	<0,5	37	300	30,00	84	280	56x183x71
200/M	2"	1200	7000	<1,0	160	2000	<0,5	37	300	30,00	73	280	56x187x71
200/B	2"	1200	7000	<0,8	188	2000	<0,5	37	300	30,00	66	280	56x197x71
250/M	2"	1500	8750	<1,2	160	2500	<0,5	46	520	37,5	91	420	61x225x90
250/B	2"	1500	8750	<0,9	235	2500	<0,5	46	520	37,5	34	420	61x235x90
320/B	2"	1920	9600	<0,7	258	3200	<0,5	59	520	48,00	38	490	61x235x91
500/B	2"	3000	15000	<0,9	350	5000	<0,5	93	850	75,00	53	653	77x237x109

**VT 1000**

Electronic timer  
Regeneration  
controlled by time,  
by volume,  
by volume/time  
- AD self-disinfection  
system  
Salt alarm

\* It can be delivered for some minutes only.

For all the models: pressure 2 - 6 bar, water temperature 5° - 30°C (41°-86°F). Electrical absorption: 12 VA. The data of flow rate and cyclic capacity are referred to a water with max. hardness of 30°f, max. salinity of 650 µS and temperature of 25° C (77°F).



### VT 2000

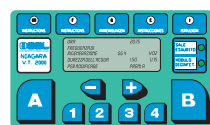
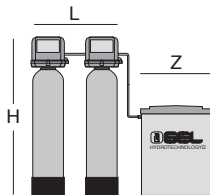
Electronic timer  
Regeneration controlled by volume, by volume/time  
- AD self-disinfection system  
Salt alarm  
- BPA\*\* Automatic mixing valve

DECAL VT 2000													
Model (l)	Connect. (")	Cyclic capacity (m <sup>3</sup> x1 <sup>°f</sup> )	Flow rate pot. use			Flow rate tech. use			Capacity salt cont. (l)	Salt per regen. (Kg)	Duration of regen. (min.)	Weight (kg)	Dimensions LxHxZ (cm)
			operation (l/h)	OP (bar)	peak (l/min)*	operation (l/h)	OP (bar)	peak (l/min)*					
15	1 1/4"	90	900	<0,5	24	150	<0,5	3	100	2,25	22	33	24x111x47
20	1 1/4"	120	1200	<0,5	32	200	<0,5	4	100	3,00	29	37	24x111x47
25	1 1/4"	150	1500	<0,5	40	250	<0,5	5	100	3,75	36	46	25x111x47
30	1 1/4"	180	1800	<0,5	48	300	<0,5	6	100	4,50	43	53	25x111x47
45	1 1/4"	270	2250	<0,5	60	450	<0,5	8	100	6,75	36	71	25x159x47
60	1 1/4"	360	3000	<0,6	81	600	<0,5	11	150	9,00	33	83	33x134x53
75	1 1/4"	450	3750	<0,7	101	750	<0,5	14	150	11,25	41	98	33x159x53
110	1 1/4"	660	4400	<0,8	117	1100	<0,5	20	200	16,50	47	155	37x186x53
110/M	2"	660	4400	<0,6	120	1100	<0,5	20	200	16,50	41	155	37x190x53
140	1 1/4"	840	5600	<0,9	117	1400	<0,5	26	200	21,00	59	183	41x186x53
140/M	2"	840	5600	<0,7	151	1400	<0,5	26	200	21,00	51	183	41x190x53
200	1 1/4"	1200	7000	<1,2	117	2000	<0,5	37	300	30,00	84	280	56x183x71
200/M	2"	1200	7000	<1,0	160	2000	<0,5	37	300	30,00	73	280	56x187x71
200/B	2"	1200	7000	<0,8	188	2000	<0,5	37	300	30,00	66	280	56x197x71
250/M	2"	1500	8750	<1,2	160	2500	<0,5	46	520	37,5	91	420	61x225x90
250/B	2"	1500	8750	<0,9	235	2500	<0,5	46	520	37,5	34	420	61x235x90
320/B	2"	1920	9600	<0,7	258	3200	<0,5	59	520	48,00	38	490	61x235x91
500/B	2"	3000	15000	<0,9	350	5000	<0,5	93	850	75,00	53	653	77x237x109

\* It can be delivered for some minutes only.

\*\* Specify in the order: VT 2000 BPA by replacing the last number of the code with "X".

For all the models: pressure 2 - 6 bar, water temperature 5° - 30°C (41°-86°F). Electrical absorption: 12 VA. The data of flow rate and cyclic capacity are referred to a water with max. hardness of 30°f, max. salinity of 650 µS and temperature of 25° C (77°F).

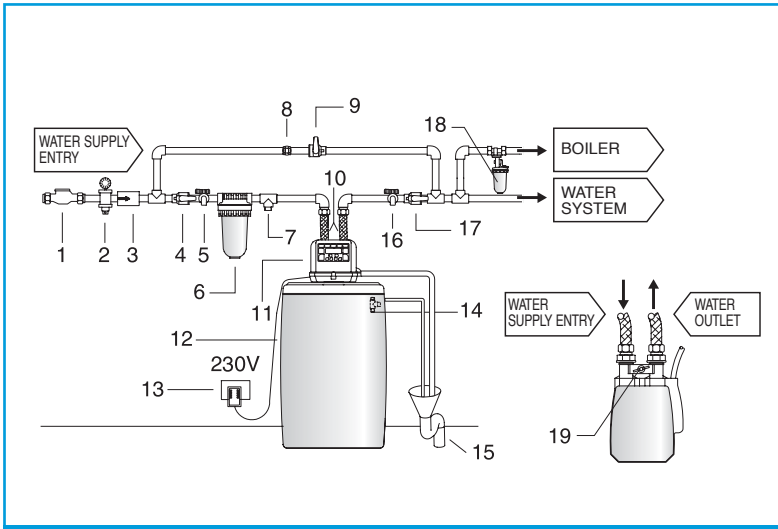


### VT 2000

Electronic timer  
Regeneration controlled by time  
- AD self-disinfection system  
Salt alarm

DUPLEX													
Model (l)	Connect. (")	Cyclic capacity (m <sup>3</sup> x1 <sup>°f</sup> )	Flow rate pot. use			Flow rate tech. use			Capacity salt cont. (l)	Salt per regen. (Kg)	Duration of regen. (min.)	Weight (kg)	Dimensions LxHxZ (cm)
			operation (l/h)	OP (bar)	peak (l/min)*	operation (l/h)	OP (bar)	peak (l/min)*					
15+15	1"	90	900	<0,5	48	150	<0,5	6	150	2,25	22	66	58x111x53
20+20	1"	120	1200	<0,5	64	200	<0,5	8	150	3,00	29	74	58x111x53
25+25	1"	150	1500	<0,5	80	250	<0,5	10	150	3,75	36	92	60x111x53
30+30	1"	180	1800	<0,5	96	300	<0,5	12	150	4,50	43	106	60x111x53
45+45	1"	270	2250	<0,5	120	450	<0,5	16	200	6,75	36	142	60x159x53
60+60	1"	360	3000	<0,6	162	600	<0,5	22	200	9,00	33	166	76x134x53
75+75	1"	450	3750	<0,7	202	750	<0,5	28	200	11,25	41	196	76x159x53
110+110	1"	660	4400	<0,8	234	1100	<0,5	40	300	16,50	47	310	82x186x71
110+110/M	2"	660	4400	<0,6	240	1100	<0,5	40	200	11,25	41	310	82x190x71
140+140	1"	840	5600	<0,9	234	1400	<0,5	52	300	21,00	59	366	92x186x71
140+140/M	2"	840	5600	<0,7	302	1400	<0,5	52	300	21,00	51	366	92x190x71
200+200	1"	1200	7000	<1,2	234	2000	<0,5	74	300	30,00	84	560	140x183x71
200+200/M	2"	1200	7000	<1,0	320	2000	<0,5	74	300	30,00	73	560	140x187x71
200+200/B	2"	1200	7000	<0,8	376	2000	<0,5	74	300	30,00	66	560	140x197x71
250+250/M	2"	1500	8750	<1,2	320	2500	<0,5	92	520	37,5	91	840	140x225x90
250+250/B	2"	1500	8750	<0,9	470	2500	<0,5	92	520	37,5	34	840	140x235x90
320+320/B	2"	1920	9600	<0,7	516	3200	<0,5	118	520	48,00	38	980	140x235x91
500+500/B	2"	3000	15000	<0,9	700	5000	<0,5	186	850	75,00	53	1306	172x237x109

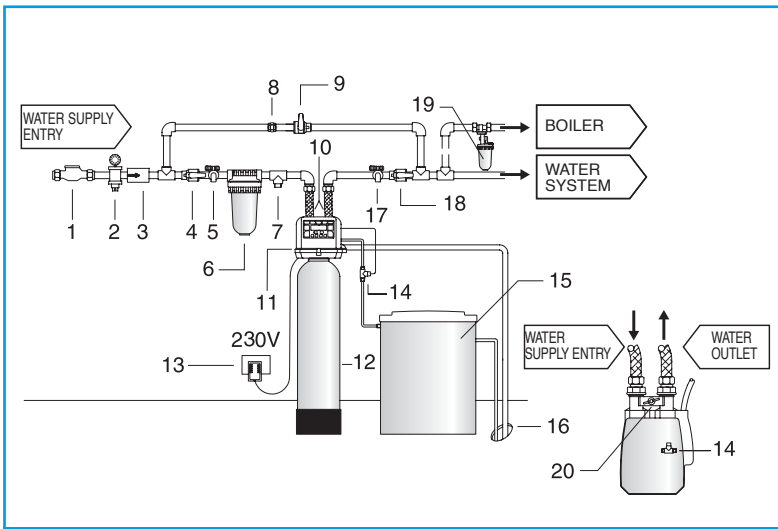
P.S. For all the models: pressure 2 - 6 bar, water temperature 5° - 30°C (41°-86°F). Electrical absorption: 12 VA. The data of flow rate and cyclic capacity are referred to a water with max. hardness of 30°f, max. salinity of 650 µS and temperature of 25° C (77°F).



1

## 1 DECALUX

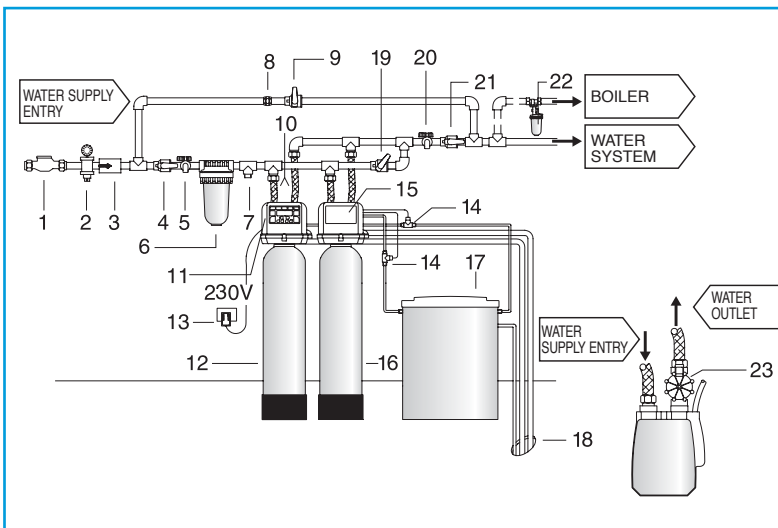
- 1) Water meter
- 2) Pressure reducer
- 3) Check valve
- 4) On-off valve before the system
- 5) Tap for taking raw water sample
- 6) Sand filter
- 7) Offtake for filtered water for garden
- 8) Pipe union
- 9) By-pass gate valve
- 10) Flexible hose fittings
- 11) Softener head
- 12) Cabinet (resins container, salt container)
- 13) 230V outlet
- 14) Chlorine production module
- 15) Drain
- 16) Tap for taking softened water sample
- 17) On-off valve after the system
- 18) Anti-scale dosing unit
- 19) Mixing valve



2

## 2 DECAL

- 1) Water meter
- 2) Pressure reducer
- 3) Check valve
- 4) On-off valve before the system
- 5) Tap for taking raw water sample
- 6) Sand filter
- 7) Offtake for filtered water for garden
- 8) Pipe union
- 9) By-pass gate valve
- 10) Flexible hose fittings
- 11) Softener head
- 12) Softener vessel
- 13) 230V outlet
- 14) Chlorine production module
- 15) Salt container
- 16) Drain
- 17) Tap for taking softened water sample
- 18) On-off valve after the system
- 19) Anti-scale dosing unit
- 20) Mixing valve



3

## 3 DUPLEX

- 1) Water meter
- 2) Pressure reducer
- 3) Check valve
- 4) On-off valve before the system
- 5) Tap for taking raw water sample
- 6) Sand filter
- 7) Offtake for filtered water for garden
- 8) Pipe union
- 9) By-pass gate valve
- 10) Flexible hose fittings
- 11) Softener head "A"
- 12) Softener vessel "A"
- 13) 230V outlet
- 14) Chlorine production module
- 15) Softener head "B"
- 16) Softener vessel "B"
- 17) Salt container
- 18) Drain
- 19) Mixing valve
- 20) Tap for taking softened water sample
- 21) On-off valve after the system
- 22) Anti-scale dosing unit
- 23) Stop valve (bistable)