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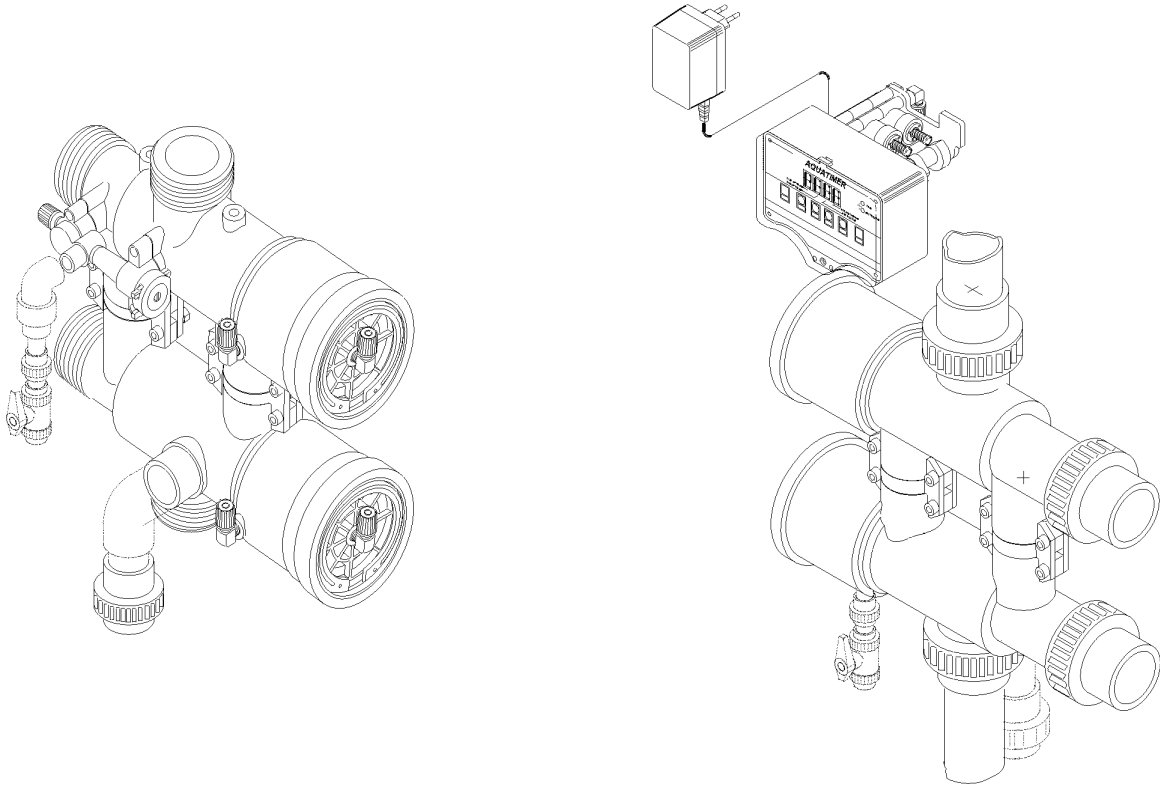
**S.I.A.T.A Asia Pacific Pte Ltd**

37 Tannery Lane  
#06-08 Tannery House  
Singapore 347790  
Tel: +65 6741 2994 • Fax: +65 6741 2995

**www.siata.com.sg**



## **USE AND MAINTENANCE MANUAL V260**



DOCUMENT	REVISION	REVISION NOTE	DATE
MAN0034	DRAFT		

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## GENERAL CHARACTERISTICS

The "V260" valves represent an essential element for the realisation of systems of various types and for various uses

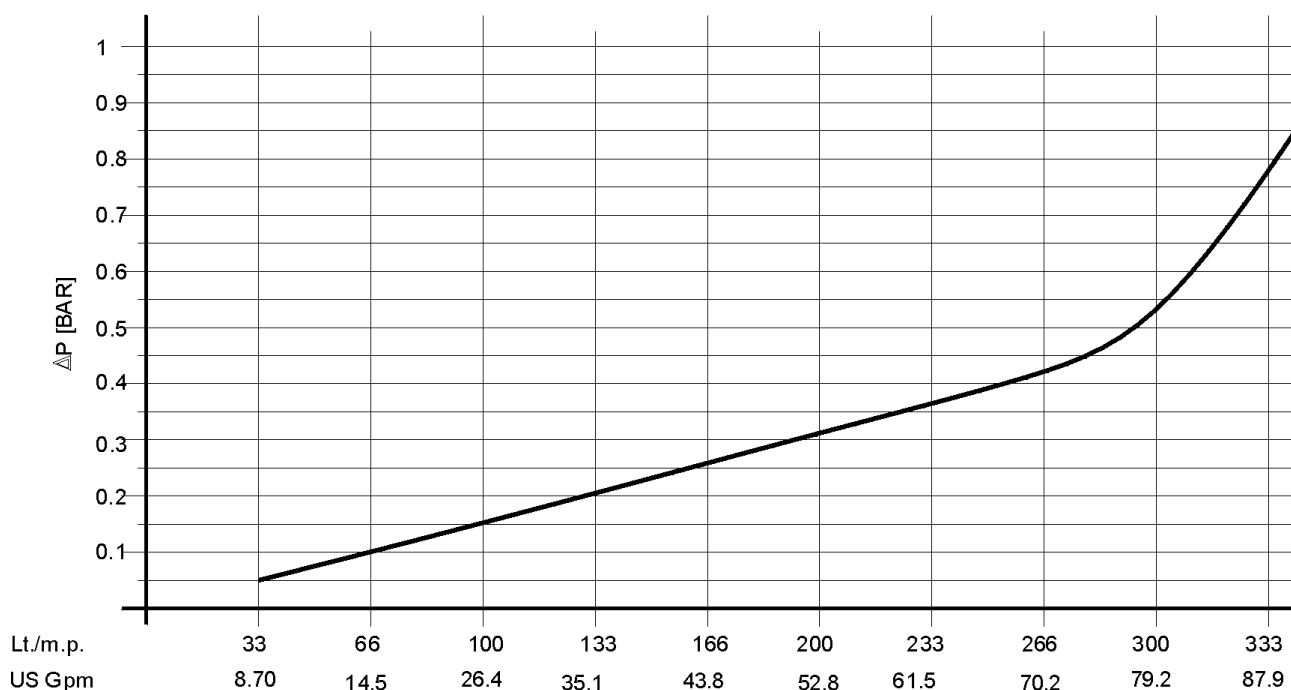
- a) SOFTENING (decalcification)- single, duplex or on more columns for domestic or industrial use
- b) DEMINERALISATION single o duplex, for all uses which require water with guaranteed quality characteristics.

The valves are made from materials which guarantee the maximum durability and quality. The valves are available with a wide range of timers, for the control of all operative phases of service and regeneration. These sophisticated electronic timers in the various models;by time, by volume, by volume/time, allow for the programming of all operative phases of water treatment systems covered by the types specified .

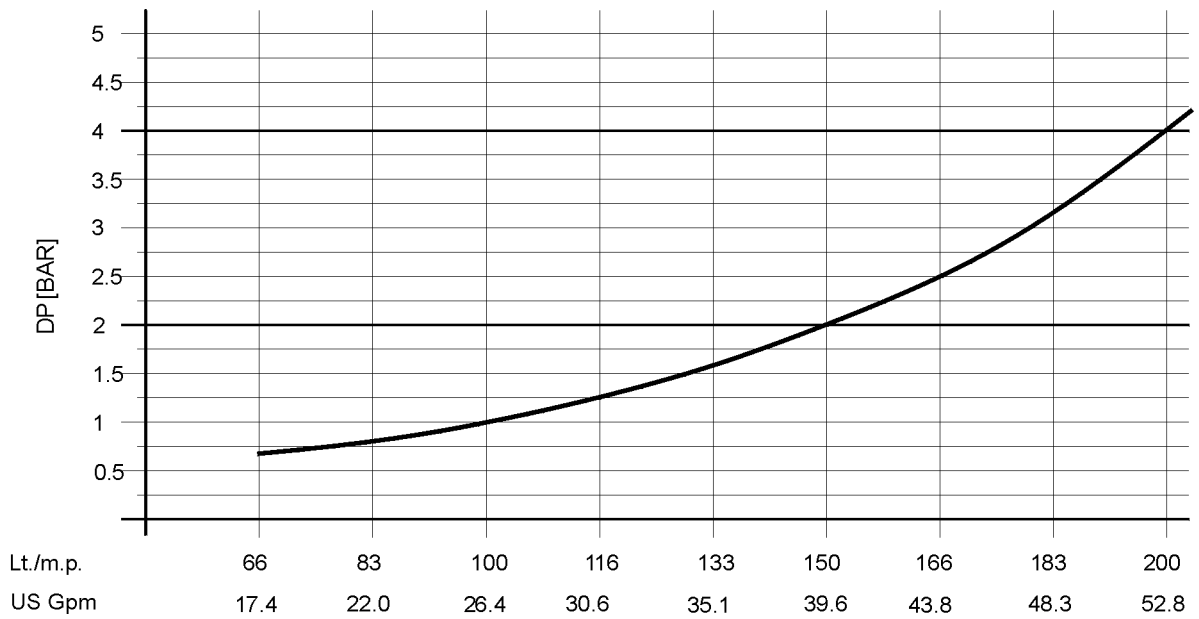
## TECHNICAL SPECIFICATIONS

Running pression	: 1.5 - 6 bar
Running load	: 21 mc/h
Countercurrent rinse load	: 12 mc/h
Slow rinse load	: 300 - 1000 l/h
Equicurrent fast rinse load	: 14 mc/h
Static resistance to pressure	: 22 bar
Max.quantity regenerable resin	: 500 l
Running temperature	: 5 - 40° c
Basic materials of principal components	: abs + fv
Entry/exit attachments	: 2" ¼ male gas

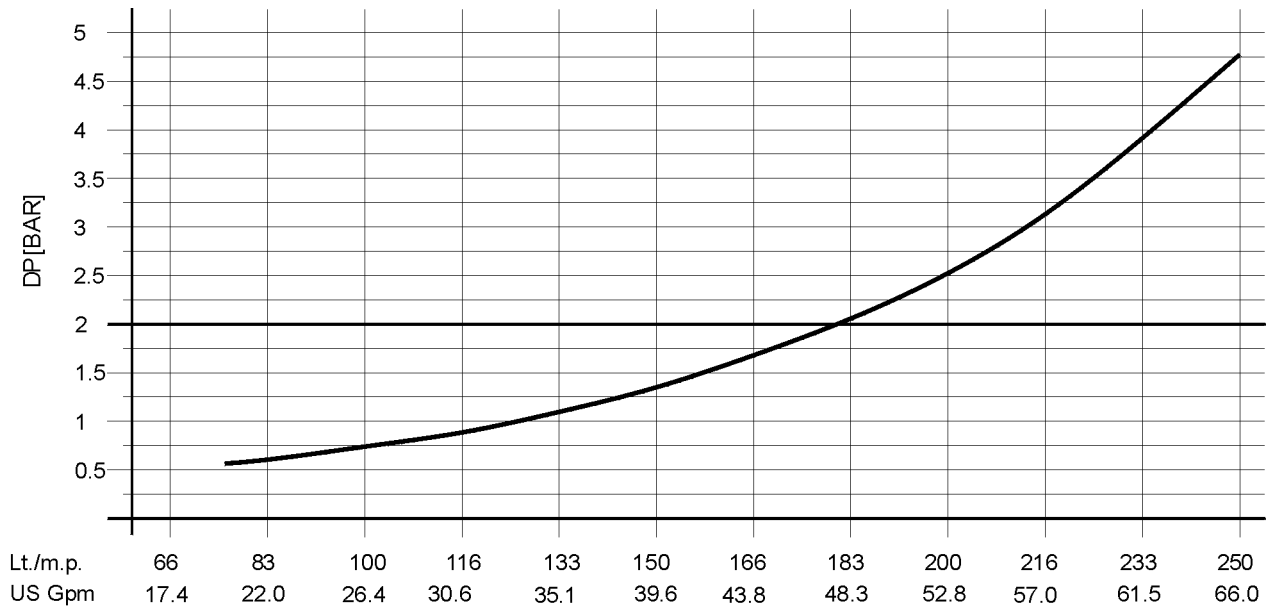
## RUNNING LOAD



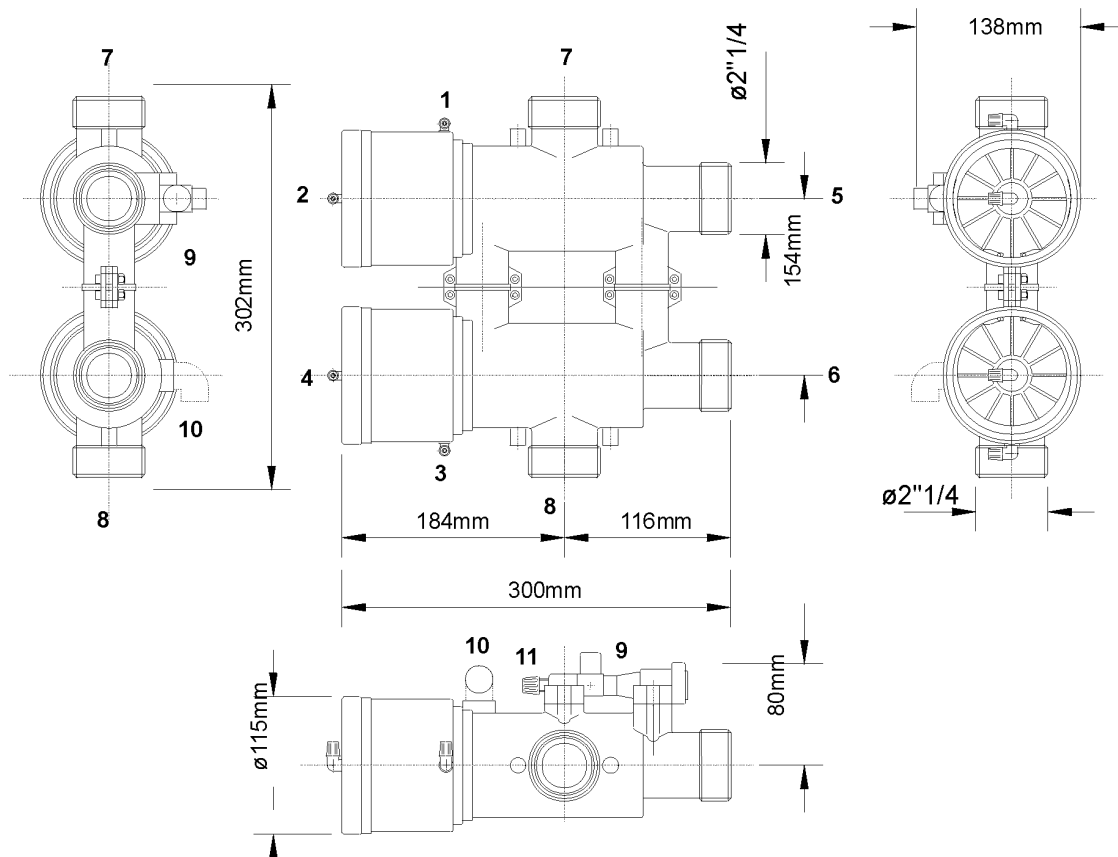
### RINSE LOAD IN COUNTERCURRENT



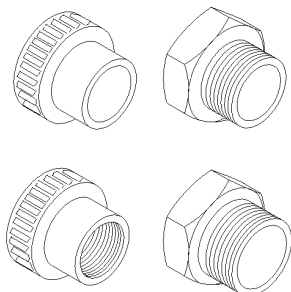
### FAST RINSE LOAD



## DIMENSIONS

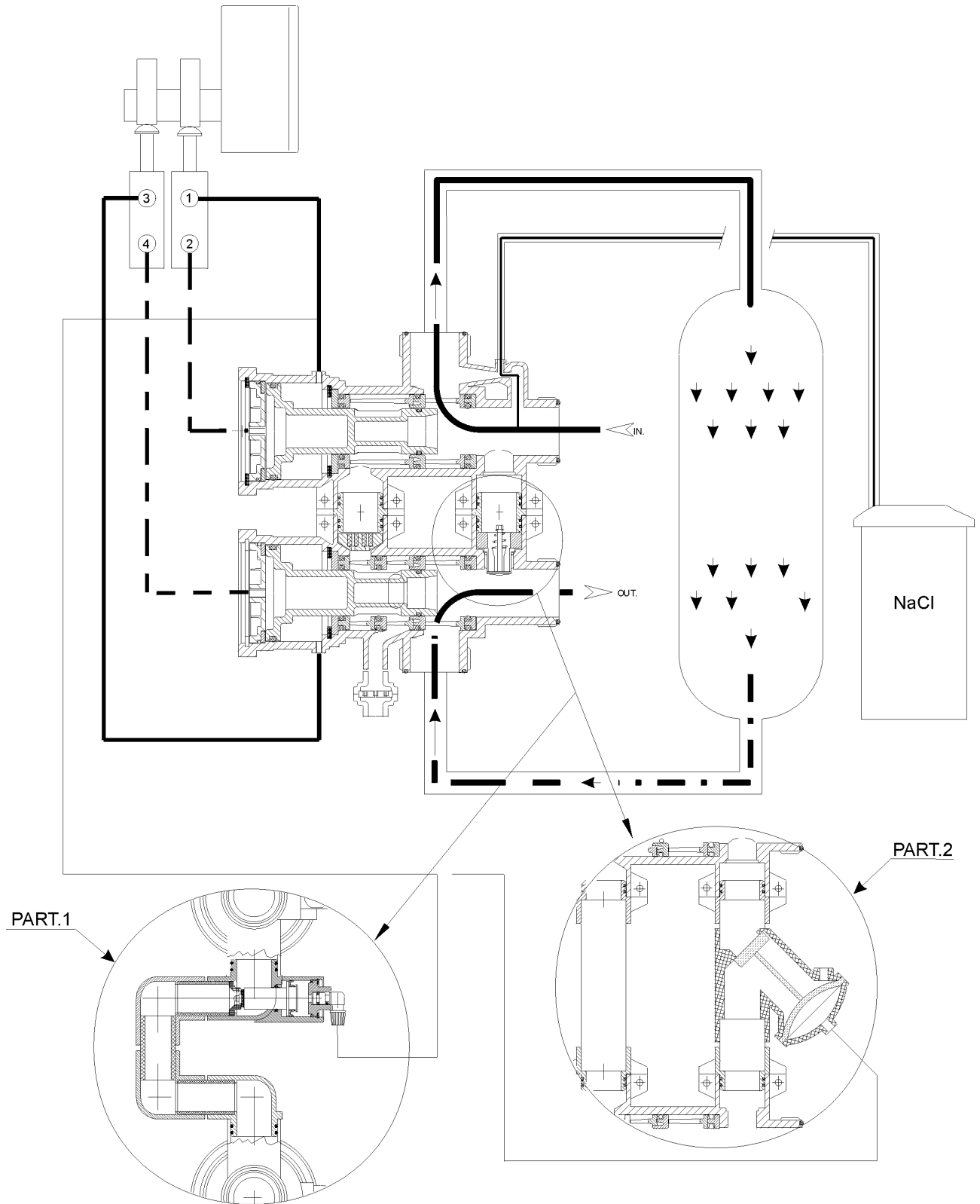


- |   |  |
|---|--|
| 1 CONNECTION FOR OPENING UPPER CYLINDER | 6 EXIT                                     |
| 2 CONNECTION FOR CLOSURE UPPER CYLINDER | 7 CONNECTION TOP COLUMN                    |
| 3 CONNECTION FOR OPENING LOWER CYLINDER | 8 CONNECTION BASE COLUMN                   |
| 4 CONNECTION FOR CLOSURE LOWER CYLINDER | 9 SUCTION CONNECTION                       |
| 5 ENTRY                                 | 10 DRAIN CONNECTION<br>DIAM. ISO 40 MALE   |
|   | 11 FLUID CONNECTION OF PILOT TIMER CONTROL |

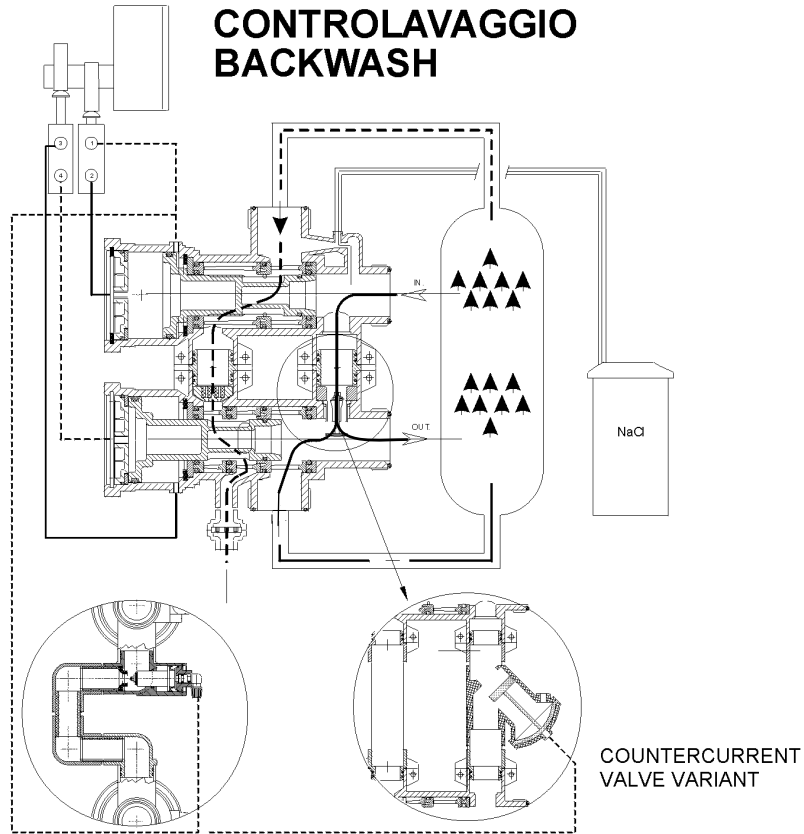


- 494-A/05 KIT CONN. PVC 2"1/4 G.F. ISO 50 F. INC.  
 494-D/05 KIT CONN. PVC/BRASS 2"1/4 G.F./1"1/2 GM.  
 494-E/05 KIT CONN. PVC/BRASS 2"1/4 G.F./2" G.M.  
 494-G/05 KIT CONN. BRASS 2"1/4 G.F./2" G.M.  
 494-P/05 KIT CONN. BRASS 2"1/4 G.F./1"1/2 G.F.  
 494-H/05 KIT CONN. PVC 2"1/4 G.F./1"1/2 GM.

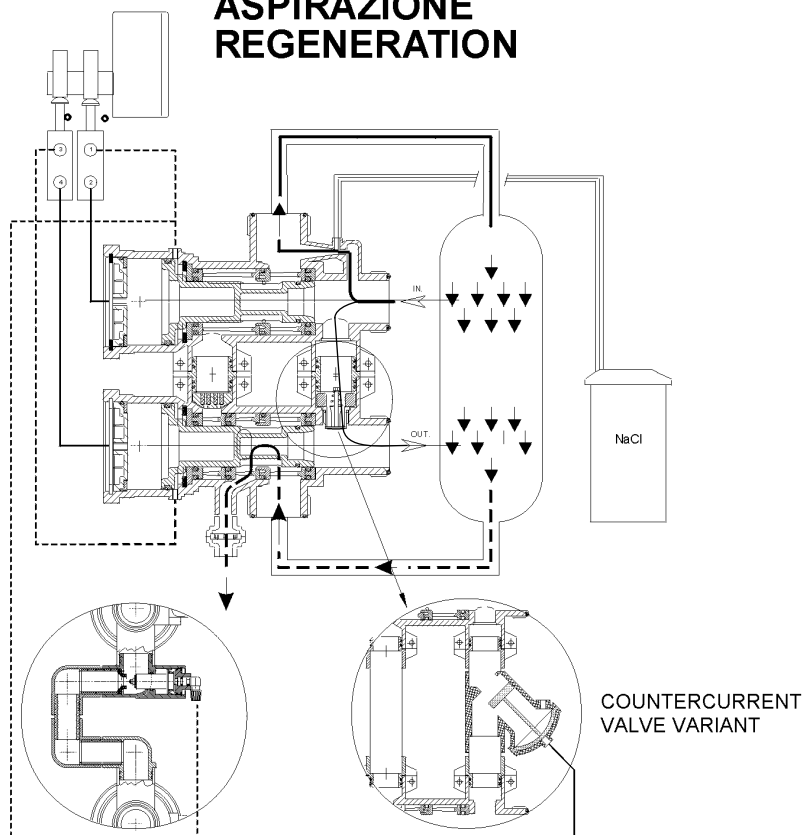
**FLOW DIAGRAM**  
SERVIZIO / SERVICE



**CONTROLAVAGGIO  
BACKWASH**

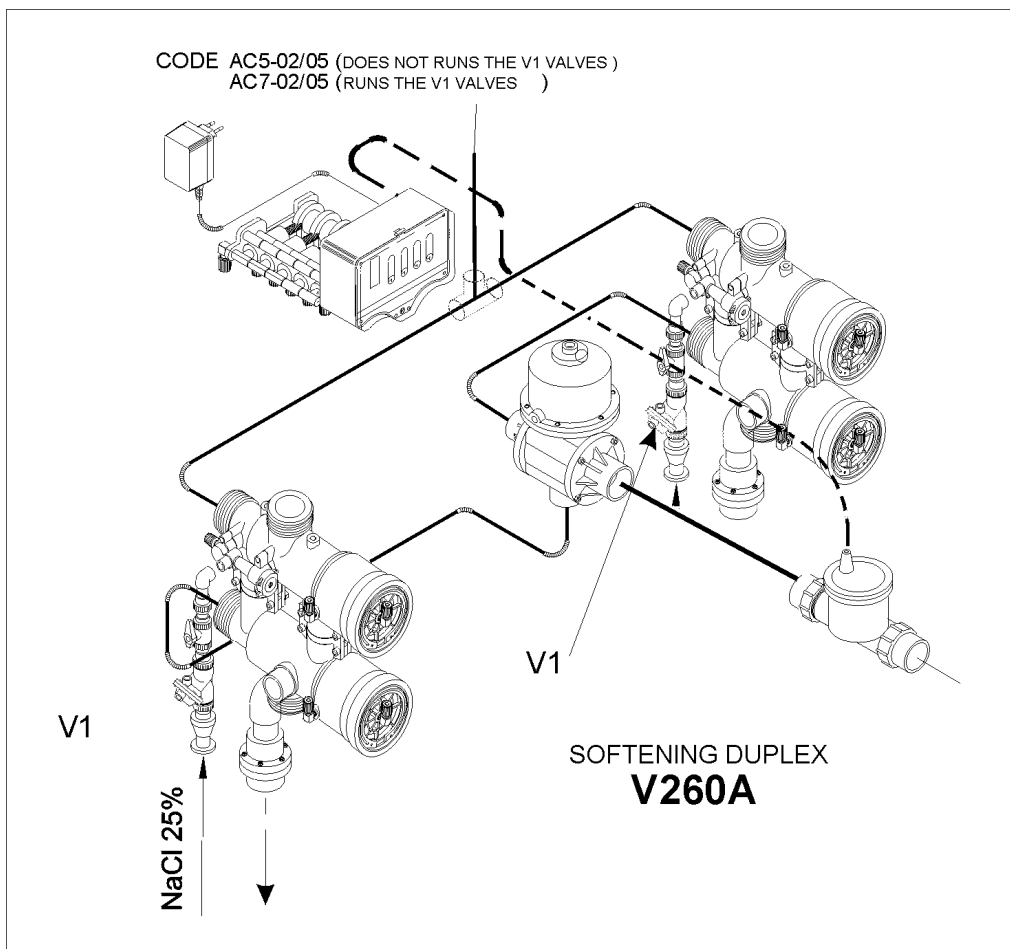
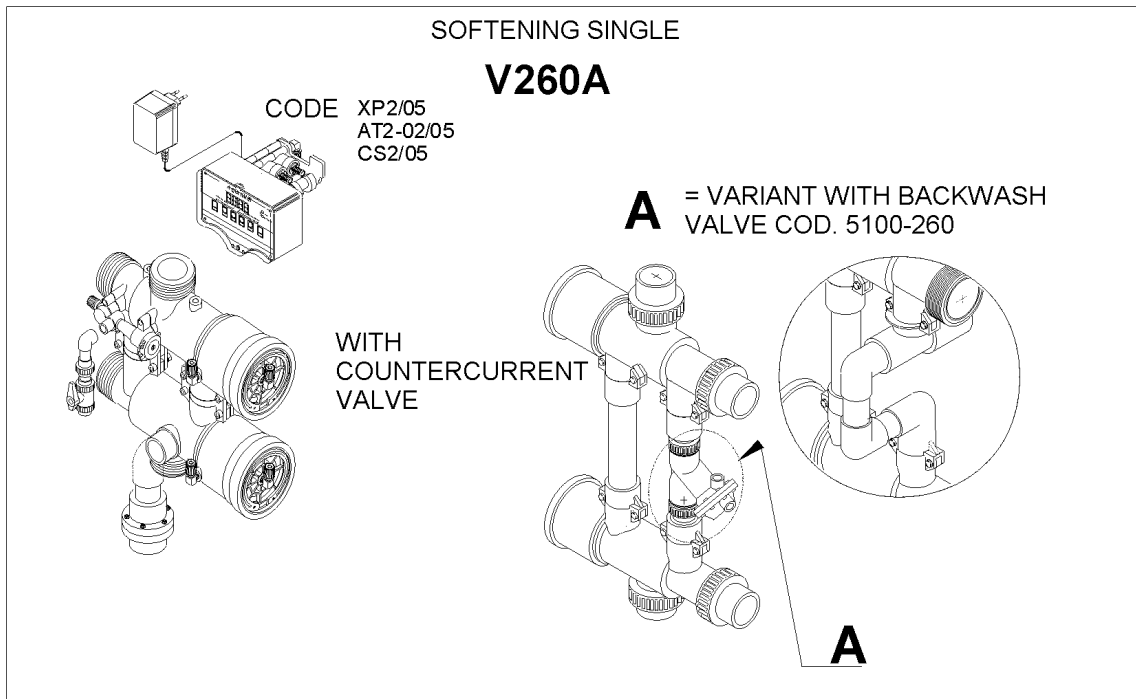


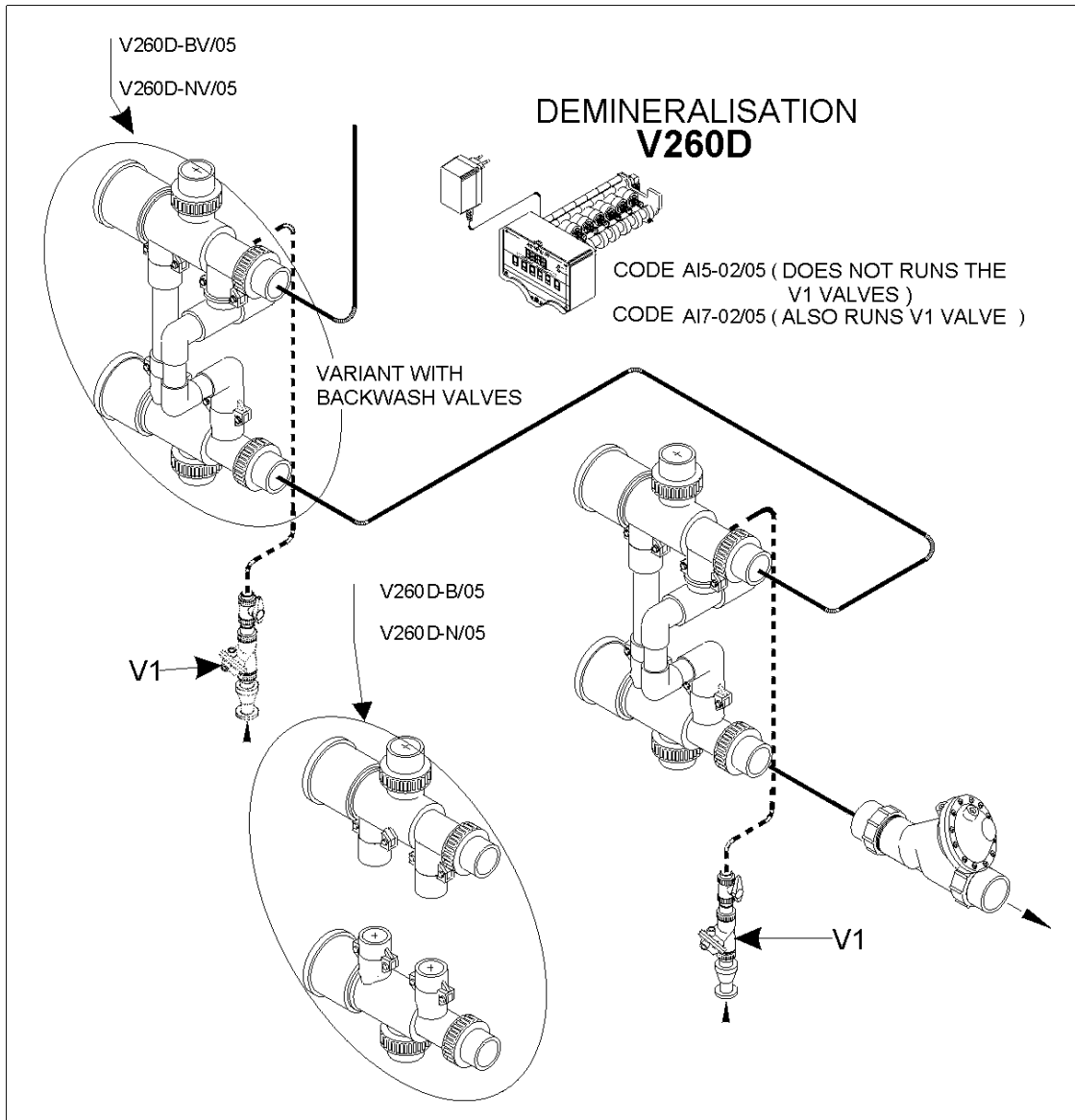
**ASPIRAZIONE  
REGENERATION**





## VERSIONS





## USE SPECIFICATIONS

Referring to the paragraph "VERSIONS" seen above, the various possibilities for the uses of this valve in the various applications may be examined.

**1) Single softening:** the system consists of a basic valve V260A-?/05 (the question mark should be substituted with the colour of the injector required), and a timer complete with a minimum of 2 external pilots in different solutions, with which the system may be personalised as desired. In particular, varying the number of external pilots, it is possible to obtain the following personalisations:

- I. **2 pilots** controls only the movement of the pistons of the valve
- II. **3 pilots** also controls an additional use closure valve
- III. **4 pilots** controls a use closure + a suction closure

**2) Duplex softening:** the system is made on two columns, each of which is run by a V260A-?/05. This is controlled, with water or air, by a timer with a minimum of 2 pilots per valve. The alternating duplex systems (one column is in service while the other is in regeneration or not in use), may be controlled by the AQUA CUBIC timer, which may be supplied in two standard versions:

- I. 5 pilots (**AC5-02/05**), run by volume. The system allows for the use of two brine valves plus a use closure valve
- II. As a variation on this system, it is possible to substitute the two brine valves with two on-off hydro-pneumatic valves for the closing/opening of the suction duct, using an AQUA CUBIC 7-pilot timer . (**AC7-02/05**)

**1) Demineralisation and Decarbonisation:** this is the applicative sector in which the characteristics of the V260 valve may be best appreciated. In particular the V260 for demineralisation is supplied in two different solutions: (see the demineralisation versions page 10)

- A) The **V260D** consists of a separated top column and base column, both however supplied with a two Ø 1" connectors, allowing the installer the possibility to choose the length of the most suitable connecting pipe.
- B) The **V260D-BV** with backwash valve, (eliminates bypass water during regeneration) consists of a top and base column, as well as kit 5100-260. Also in this case, the definitive connection between the two parts must be carried out by the installer.

The timer predisposed for demineralisation is electronic with external pilots, capable of controlling an anionic and cationic column, can control the level of conductivity showing a valve in  $\mu\text{siemens/cm}$  at the exit of the system, and regenerate the system automatically. The number of pilots of the timer is determined by the type of system required

- I. **AQUA IONIC 5 pilots ( AI5-02/05 )** controls the two columns + an on-off hydro-pneumatic use closure valve
- II. **AQUA IONIC 7 piloti ( AI7-02/05 )** controls the two columns + an on-off hydro-pneumatic use closure valve+ two on-off hydro-pneumatic valves for the closing/opening of the regenerator suction.

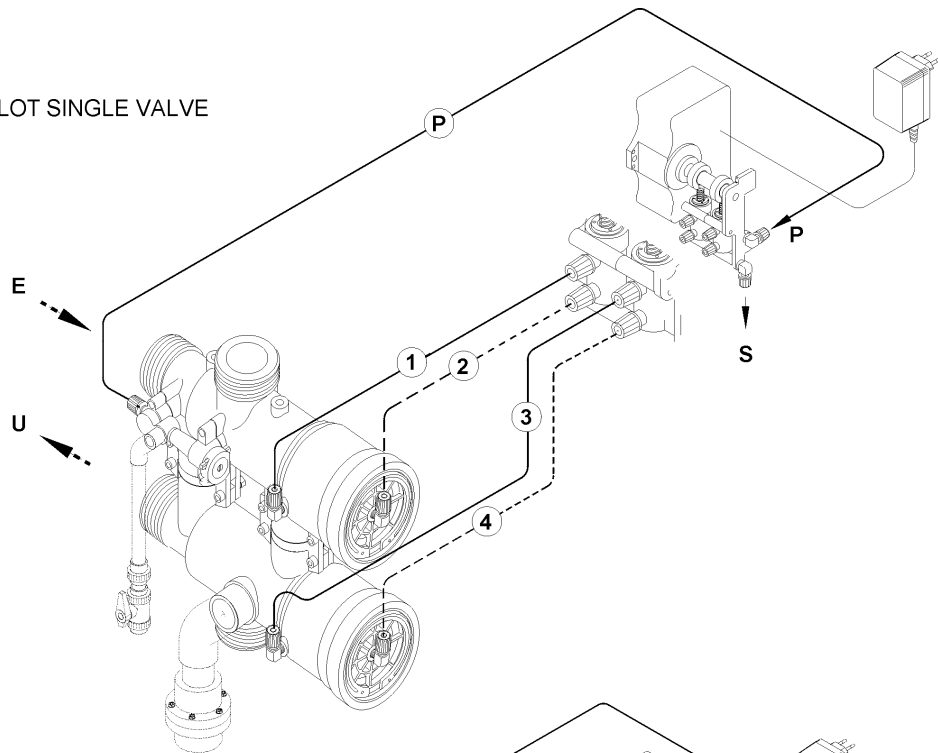
**4) Filtration:** the considerations made regarding softening are valid both for single and duplex system, with the exception that in this case the suction of the regenerator does not need to be controlled.

. For further details regarding the timers, see the table of timer choice (pag. 21)

N.B. Among the accessories of the V260, note the kit code 5100-260 of the backwash valve, the bypass of unpurified water towards use, during the regeneration phase, can be avoided.

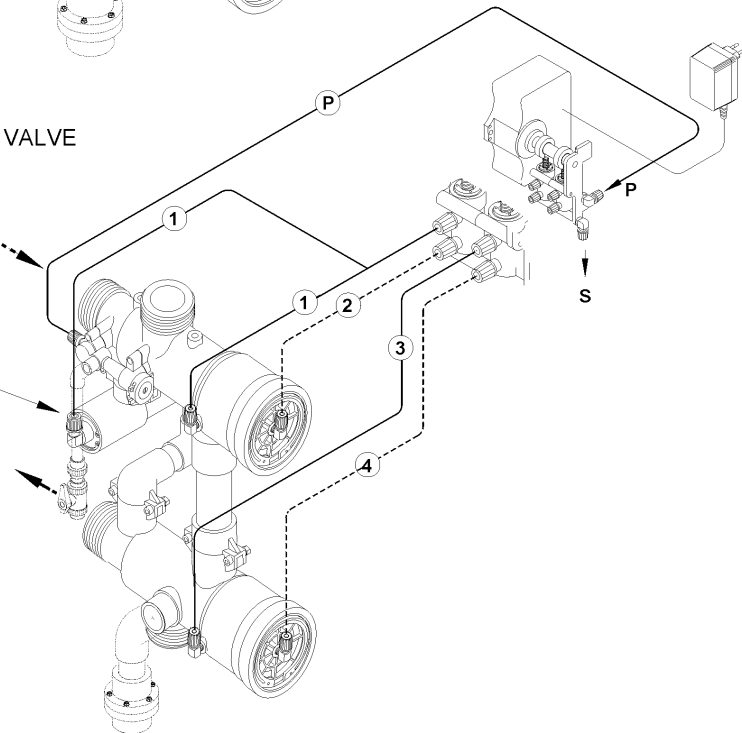
### TIMER - VALVE CONNECTIONS

2 - PILOT SINGLE VALVE



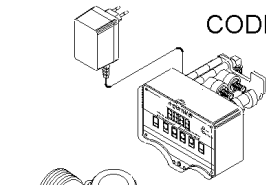
2 - PILOT SINGLE VALVE

SIATA VALVE  
 COD. 5100/260  
 VARIANT  
 COUNTERCURRENT  
 AND BYPASS DURING  
 REGENERATION VALVE

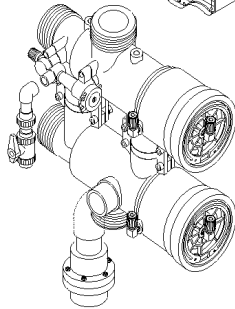


SOFTENING SINGLE

**V260A**

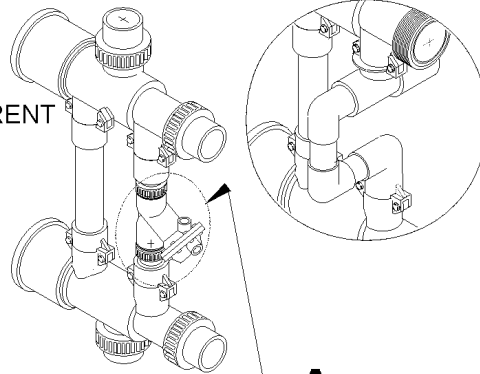


CODE XP2/05  
AT2-02/05  
CS2/05



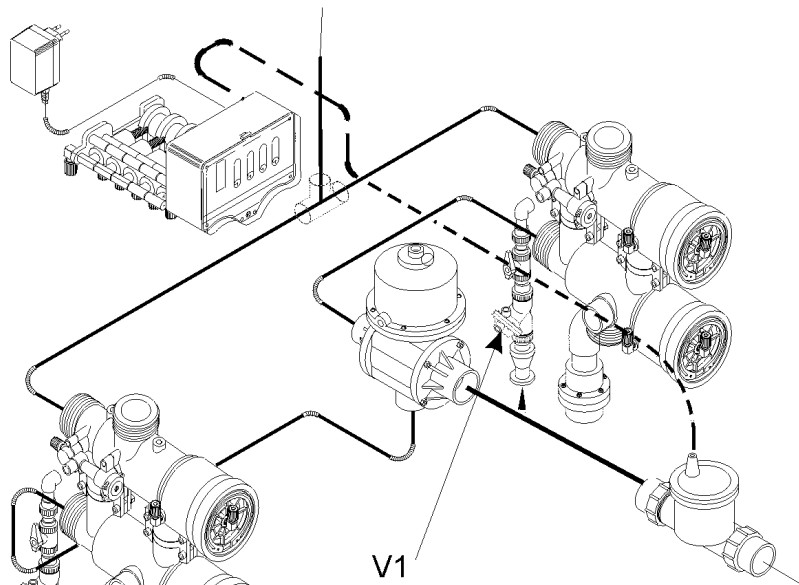
WITH  
COUNTERCURRENT  
VALVE

**A** = VARIANT WITH BACKWASH  
VALVE COD. 5100-260



**A**

CODE AC5-02/05 (DOES NOT RUNS THE V1 VALVES )  
AC7-02/05 (RUNS THE V1 VALVES )

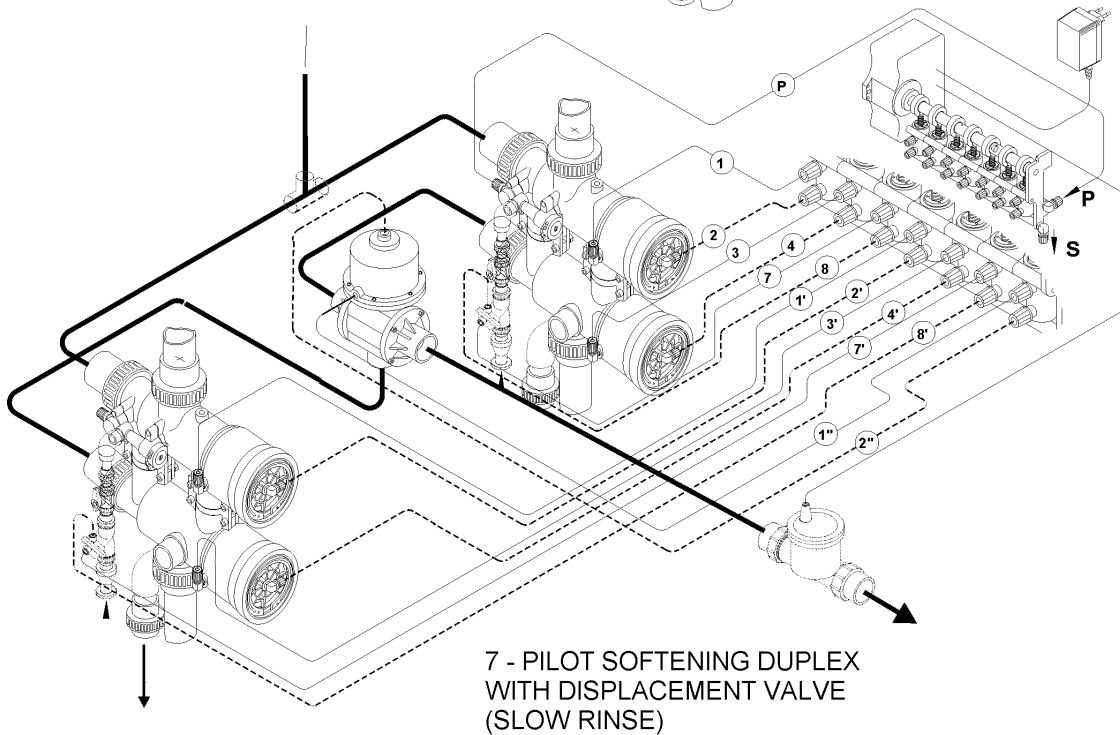
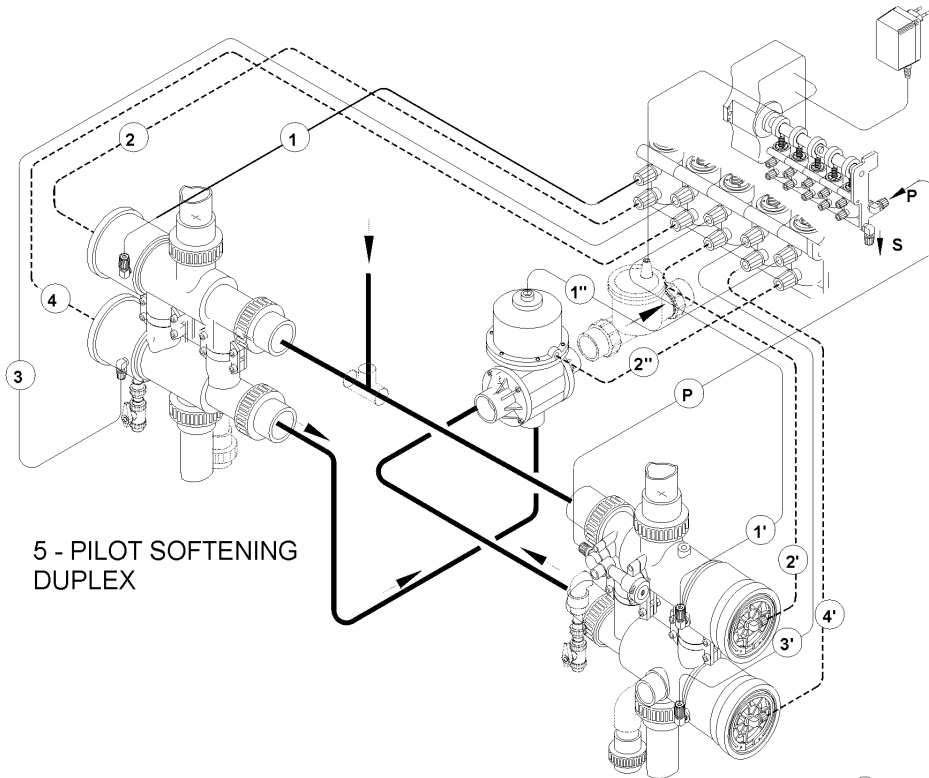


V1

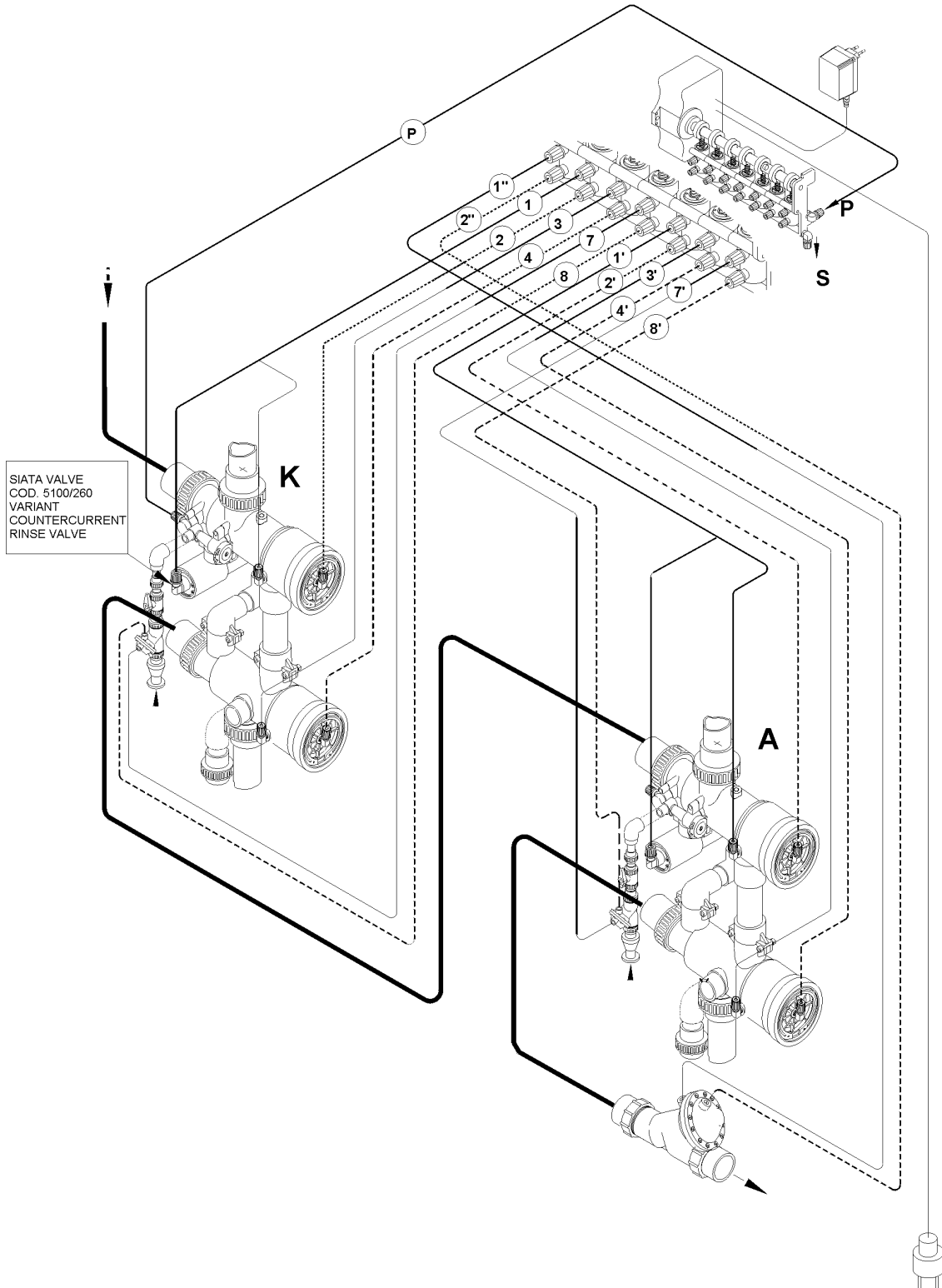
V1

SOFTENING DUPLEX  
**V260A**

NaCl 25%



### 7 - PILOT DEMINERALISATION



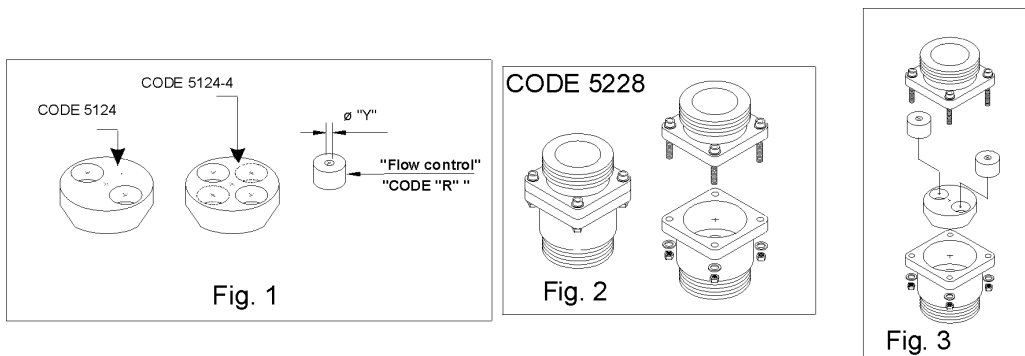
## FLOW CONTROL SYSTEMS

The S.I.A.T.A. flow control system is composed of 3 parts, see page 1:

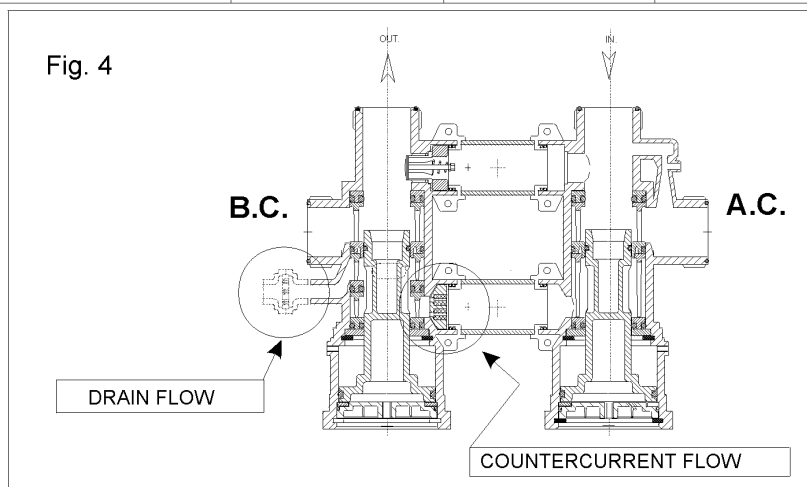
1. The flow delivery with 2 or 4 drill holes cod. 5124 or 5124-4
2. The flow cod. 70-\* (with various dimensions)
3. The flow delivery part cod 5228

In the solution proposed in fig. 3, it may be operated easily as a drain flow control of a V250 valve using a normal adaptor  $\varnothing 40$  ISO F – 1" 1/2 G.F..

The solution in fig.1 may be used instead as a flow control of the countercurrent, see fig.4. For the calculation of the load which are to be controlled, see the table below.

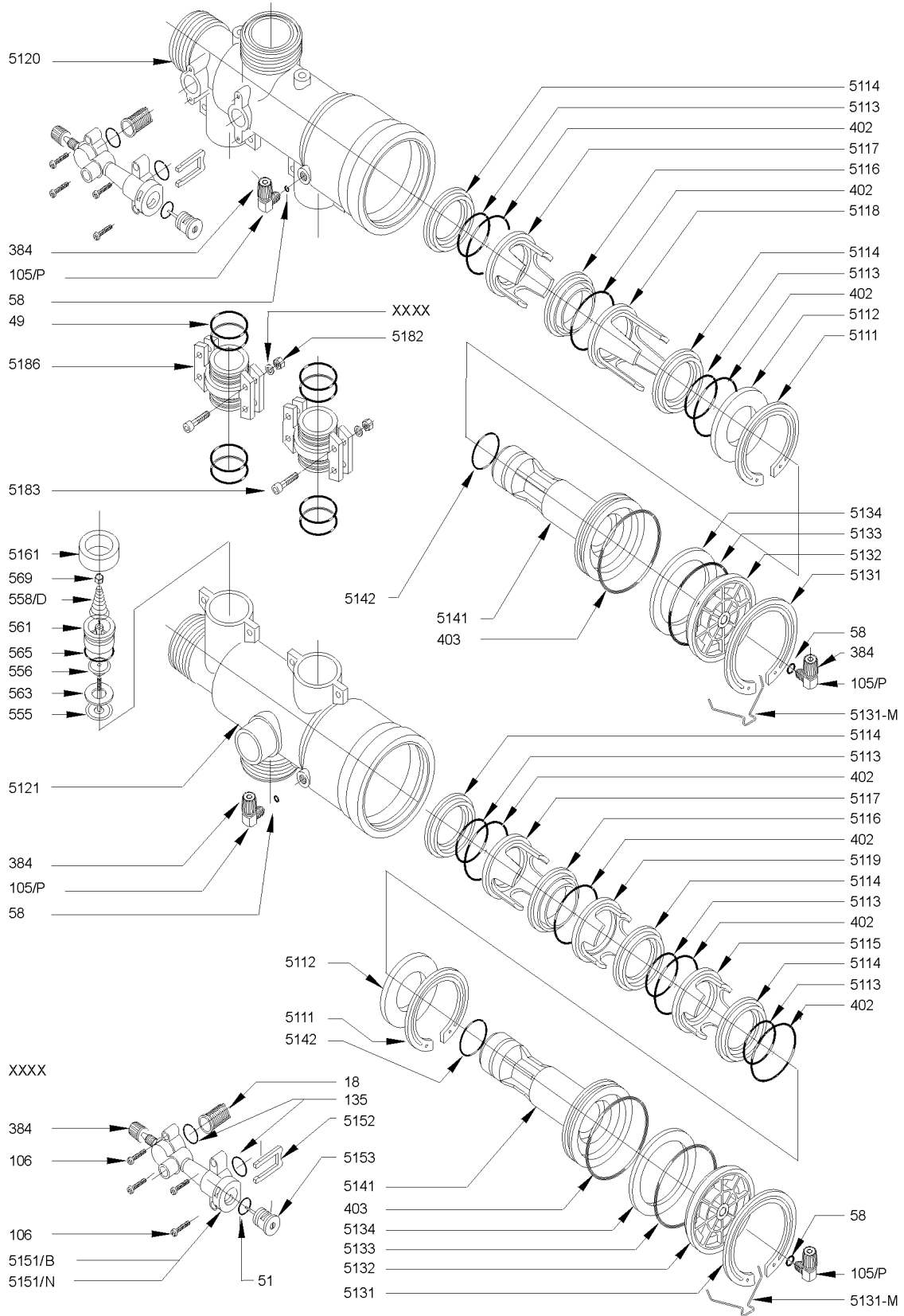


FLOW CONTROL				FLOW TO DRAIN	
CODE	"R"	mm	Y	Litri/ora	G.p.m. US
070/1		3		320	1.41
070/2		3.5		480	2.11
070/3		4		700	3.08
070/4		5		950	4.18
070/5		6		1450	6.38

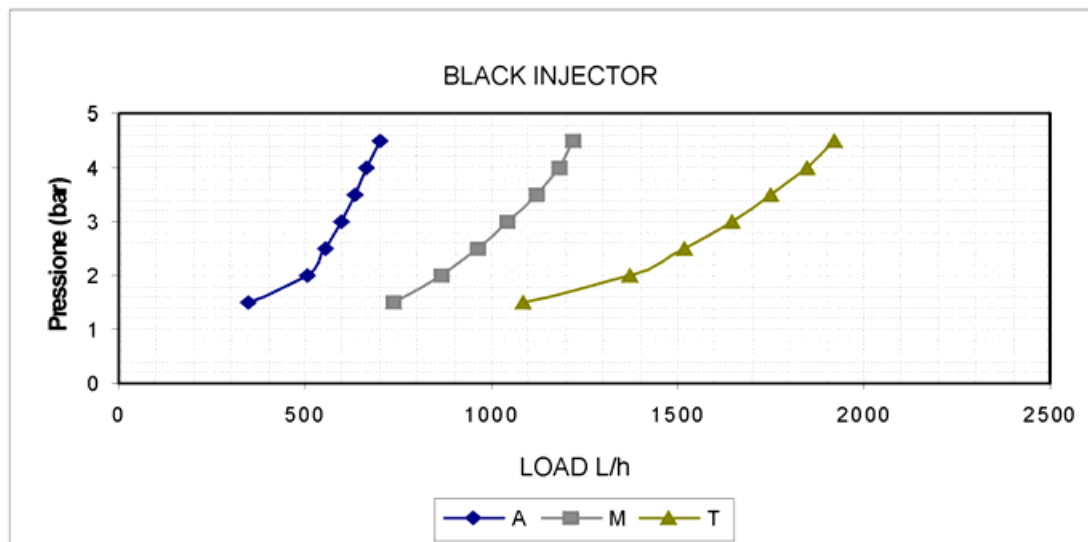
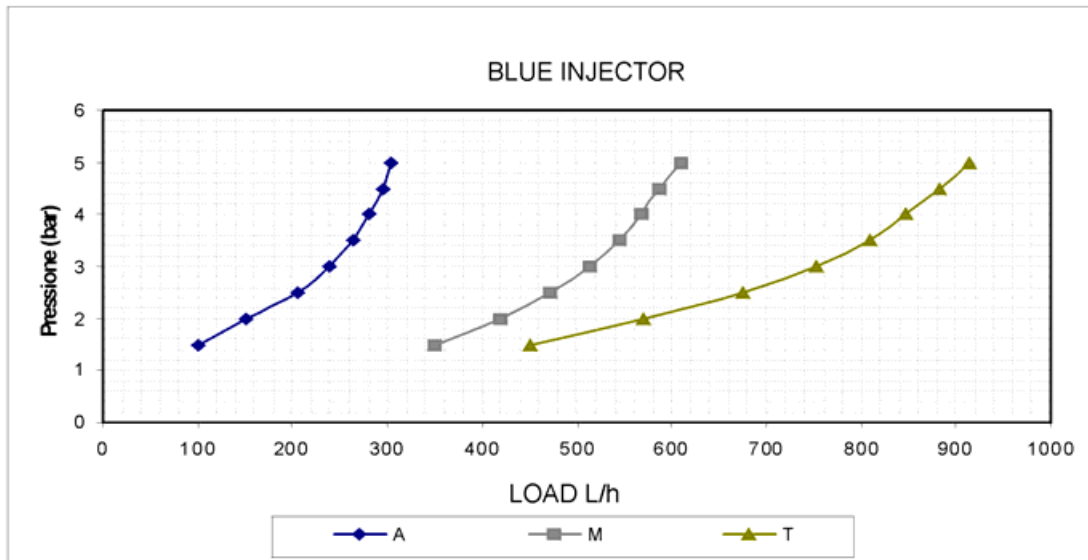




### V260 BASIC COMPONENTS



## V260 INJECTOR

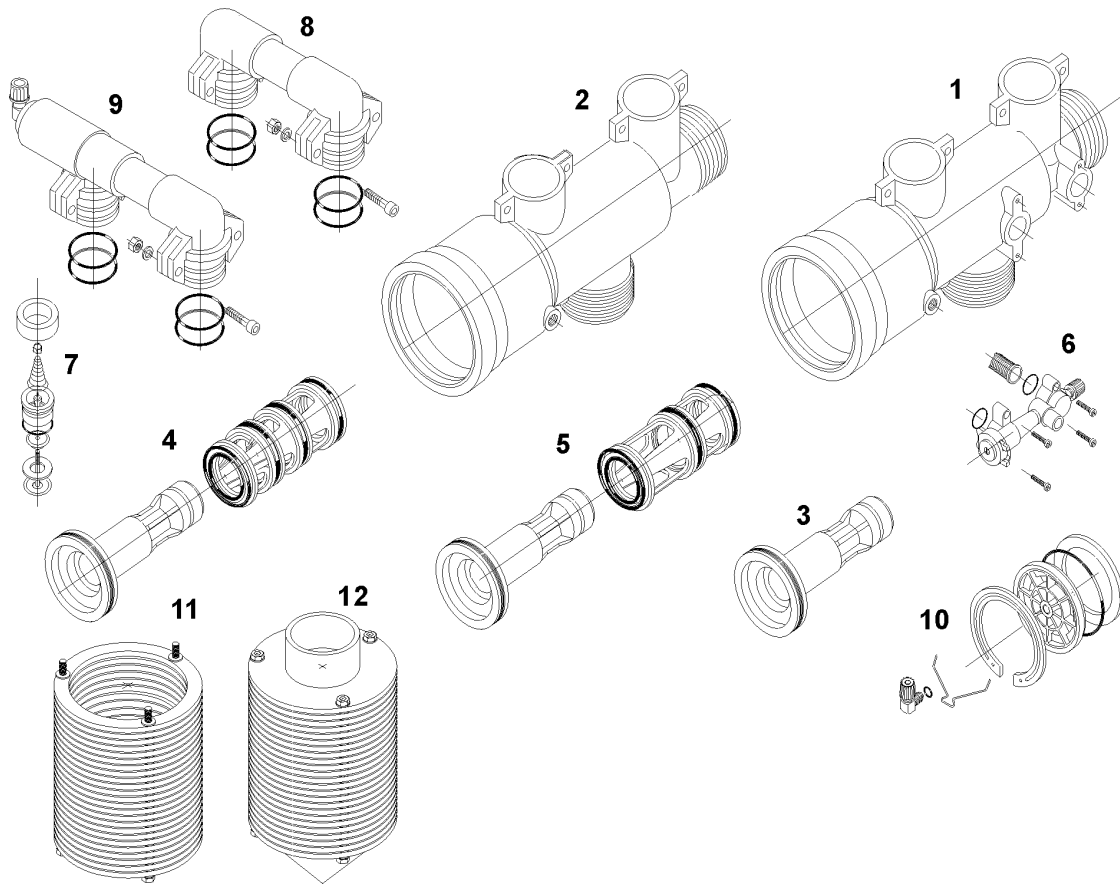


SERIES "A" Aspirazione / Suction

SERIES "M" Motrice / Motive

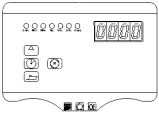
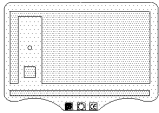
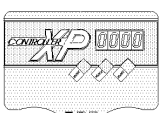
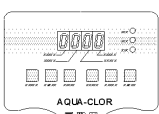
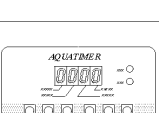
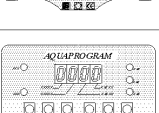

SERIES "T" Totale / Total

## SPARE PARTS



Pos.	Code	Description
1	5120-L	V250-V260 A/C Machined body
2	5121-L	V250-V260 B/C machined body
3	5141	V250- 260 piston
4	5110-AC	A/C V250 – 260 linings set
5	5110-BC	B/C V250 – 260 linings set
6	5150-B	V250- 260 blu injector set
	5150-N	V250- 260 black injector set
	5150-F	V250- 260 filter injector set
7	5160	V250-260 complete mobile valve set
8	5180-SC	V250 A/B column ring set
9	5100-250	V250 complete backwash valve
10	5130	Stopper set V250-260
11	5200-A	Under valve filter for V250A (0.3 mm)
	5200-F	Under valve filter for V250F (0.8 mm)
12	5201-A	Base filter for V250A (0.3 mm)
	5201-F	Base filter for V250F (0.8 mm)

## TIMER

<p>THIS TABLE SHOWS A WIDE RANGE OF CONTROL TIMERS, TO USE IN CONJUNCTION WITH THE VARIOUS MODELS OF THE V260 VALVE, FROM THE SIMPLEST TIMERS, CONSISTING OF THE ELECTROMECHANICAL VERSIONS TO THE RANGE WHICH ALLOWS FOR THE MOST ADVANCED APPLICATIONS OF THE TIMER/VALVE SYSTEM TO REALISE WATER TREATMENT SYSTEMS OF THE MOST RECENT AND MODERN GENERATION.</p> <p>THE V250 REQUIRES TIMERS WITH A MINIMUM OF TWO EXTERNAL PILOTS</p>		APPLICATION		TYPE OF VALVE		FUNCTION VARIABLES								
		DESCRIPTION	CODE TIMER	SOFTENING	FILTRATION	V260A	V260F	TIME CONTROL	VOLUME CONTROL	VOLUME CONTROL	DIN CONNECTION	CHLORINE PRODUCER	CONDUCTIBILITY CONTROL	CONNECTION CABLE VOL.CONT.
	STANDARD ELECTRONIC CONTROLLER	CS2	●		●		●							
	STANDARD ELECTRONIC TIMER WITH REGENERATION AT TIME SET FOR DAYS REQUIRED. REGENERATION DEPENDS ON THE CHOSEN SYSTEM SET.													
	STANDARD PULSE TIMER	SP2	●		●						1			
	ELECTROMECHANICAL PROGRAMMER WITH MANUAL START-UP OF REGENERATION, WITH THE POSSIBILITY OF REMOTE START-UP	SP2-08		●		●					1			
	XP CONTROLLER TIMER	XP2	●	●	●	●	●							
	ELECTRONIC PROGRAMMER WITH ADJUSTABLE REGENERATIONS TIMES, REGENERATION START-UP BY TIME OR VOLUME WITH DELAYED OPERATION. MANUAL START-UP AVAILABLE	XP2-01	●				●	●					●	
	AQUA-CLOR TIMER	ACL2	●		●		●				●			
	ELECTRONIC PROGRAMMER WITH ADJUSTABLE REGENERATIONS TIMES, REGENERATION START-UP BY VOLUME AND BY TIME WITH DEFERRED START-UP. EEPROM MEMORY. CHLORINE PRODUCER. REMOTE STARTER ON REQUEST.	ACL2-01	●				●	●	●		●	●		
	AQUA-TIMER TIMER	AT2	●	●	●	●	●							
	ELECTRONIC PROGRAMMER WITH ADJUSTABLE REGENERATION TIMES, REGENERATION START-UP BY TIME/VOLUME, VOLUME WITH DEFERRED START-UP. REMOTE STARTER AVAILABLE	AT2-01	●				●	●	●				●	
		AT2-02	●		●		●	●	●					
	AQUAPROGRAM TIMER	AP2-02	●		●		●	●	●	2	●			
	ELECTRONIC PROGRAMMER WITH ADJUSTABLE REGENERATION TIMES, REGENERATION START-UP BY TIME/VOLUME WITH DEFERRED START-UP. OPTIMISES AND CONTROLS THE REGENERATION CYCLE, PUMP OR OTHER ELEMENT CONTROL. AVAILABLE REMOTE STARTER, INHIBIT ENTRY, EEPROM MEMORY. CHLORINE PRODUCER ON REQUEST (PATENT S.I.A.T.A.)													
	AQUA CUBIC TIMER	AC5-02	●		●		●	●	●	1				
	ELECTRONIC PROGRAMMER WITH ADJUSTABLE REGENERATION TIMES. POSSIBILITY FOR DUPLEX REGENERATION USE. REGENERATION START-UP BY VOLUME. EEPROM MEMORY	AC7-02	●		●		●	●	●	1				

## MAINTENANCE ADVISE

Problem	Cause	Corrective action
Drain leaking while in service or on stand-by	Pilot leakage	Disconnect alternately connections 2 and 4, see page 12. If water is leaking from one of the two pressure connections, this means that the relative pilot has leaks and should be replaced. If the leakage does not come from the pilot, the cause should be sought, possibly originating from the head of the V260 piston.
	Leakage on the drain of the valve	Disconnect one by one the connections 1 and 3, see page 12; if the leaking stops check that the O-rings pos.A,B,C and D are undamaged. Check for any scratches on the piston.
Maintenance of the two chambers A/C and B/C		<b>A)</b> Turn off the entry water <b>B)</b> Disconnect the pilot pipes of the two pistons <b>C)</b> Remove the seeger ring from the stopper, using the special pliers. <b>D)</b> Remove the stopper or the relative O-ring. <b>E)</b> Extract the piston using 2 pliers, with which to hold of the two lateral grooves to be found at the base of the piston. If the operation is still difficult, try to loosen the external connecting reduction adaptor (entry or exit) <b>F)</b> Remove the seeger ring fitting nut plastic screw <b>G)</b> Remove the plastic screw and the whole set of distancers from the chamber. In order not to lose the consequence, the removed pieces should be piled up inside the up-turned piston. <b>H)</b> Check that the inside of the chamber and the various O-rings are undamaged <b>I)</b> Reassemble everything taking care when positioning the two seegers, particularly the one with the stopper which must be put in place slightly forcing the expansion with the pliers, and checking that the safety device is correctly positioned. The seeger should however be replaced each time maintenance is carried out.
Fughe di durezza all'uscita	Possible leak between entry and exit or on AB/BC seal	1. Check that the mobile valve is undamaged (pos.E) 2. On the models with the countercurrent valve, check that the seal is undamaged (pos.F)
Suction failure	Injector /drain	Case 1 (air suction) : Check the salamoia valve Case 2 (Injector sends water back) : ✓ The drain does not work because it is obstructed or because there is too much pressure after the drain ✓ The injector is obstructed ✓ In the two points above have occurred, check that the resin is not impacted under the below-valve filter.
Suction during countercurrent	Excessive drain load	Check that the flow controls assembled on the drain are adequate for entry pressure and load.