

Drinking water treatment system

Duplex

Ion exchange multi column water softeners



Calcium and Magnesium salts cause water hardness, which is the main reason of scale and damages to water systems, water heaters, boilers, household electrical appliances, taps and fittings. If water hardness is higher than 15° f, it is recommended to install an ion exchange water softener.

It is important to install a water softener as it solves the problem of scale as well as reduces the energy cost and the use of detergents, makes skin moisturized and clothes clean.

GEL water softeners are:

- Compact in design and small in sizes
- Efficient in reducing hardness and washing resins, and with low consumptions
- Fitted with electronic timer to control regeneration automatically by time, pure volume or volume/time.

Duplex - Features

Duplex are ion exchange two column water softeners. They supply softened water 24 hours a day without a break, as fitted with the timer VT 2000 AD, which controls the alternate regeneration of the cylinders and keeps one of them always in stand-by. In case of a huge water demand, the second cylinder comes to the aid of the first one.

Duplex are fitted with:

- *Overflow* function, which doubles the peak flow rate compared to traditional water softeners
- Resin self disinfection system
- Low salt alarm
- Volumetric electronic timer

Duplex are made up of head with hydropneumatic valve in plastic and electronic timer, plus cylinder in fibreglass.

All equipment in contact with drinking water is manufactured with top quality materials.

Duplex - Installation

Duplex must be installed by qualified staff, in a dry place protected from frost and sun rays.

- After checking the proper installation, the qualified staff tests and commissions the unit.
- Provide a 230V power supply plug.
- Install a filter between the cut-out bypass and the water supply entry of the softener.
- Use flexible hoses or vibration-damping joints to connect the softener to the installation.
- Drain must be a siphonic one, to be placed below the "overflow" of the brine tank.
- Install a surge tank if pressure is below 2 bar.
- Install a pressure reducer if pressure is over 6 bar.
- Install a check valve after the water meter.
- For potable use:
 - Install a mixing valve on each column (residual hardness = 15 °f) or build it from the installation;
 - Install the AD module (resin self disinfection system and low salt alarm to regenerate the resins).

PS. For details on how to programme the timer, please refer to the operating instructions of water softeners.

Duplex - Maintenance

- Regularly clean the cartridge of the filter before the softener.
- Clean the brine tank every six months.
- Regularly check and refill salt in the brine tank (according to the technician's indications).
- Check water hardness at the outlet every two months.
- Regularly make sure that salt level in the brine tank is above water level.
- Check correct time on the timer every two months.



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Technical Specifications

ITEM	CODE	CON.	RES. VOL.	CYCLIC CAPAC.	FLOW RATE POTABLE USE*		FLOW RATE TECHNICAL USE		FLOW RATE TECHNICAL USE		BRINE TANK CAP.	SALT CONS. PER REGEN.	REGEN. DURAT.	DIMENSIONS	
					(h.l.<5)		(h.l.<0,5)		(h.l.>0,5)					Cylinder (ØxH) cm	Brine Tank (ØxH) cm
					Operation m3/h	Peak l/min	Operation m3/h	Peak l/min	Operation m3/h	Peak l/min					

DUPLEX 15-200

Duplex 15 VT 2000 AD	AD9.915.40	1" F	15	90	0,9	48	0,15	6	0,45	18	100	2,25	22	24x111	47x62
Duplex 20 VT 2000 AD	AD9.920.40	1" F	20	120	1,2	64	0,2	8	0,6	26	100	3	29	24x111	47x62
Duplex 25 VT 2000 AD	AD9.925.40	1" F	25	150	1,5	80	0,25	10	0,75	32	100	3,75	36	25x111	47x62
Duplex 30 VT 2000 AD	AD9.930.40	1" F	30	180	1,8	96	0,3	12	0,9	38	100	4,5	43	25x111	47x62
Duplex 45 VT 2000 AD	AD9.945.40	1" F	45	270	2,25	120	0,45	16	1,35	56	100	6,75	36	25x159	47x62
Duplex 60 VT 2000 AD	AD9.960.40	1" F	60	360	3	162	0,6	22	1,8	76	150	9	33	33x134	53x75
Duplex 75 VT 2000 AD	AD9.975.40	1" F	75	450	3,75	202	0,75	28	2,25	94	150	11,25	41	33x159	53x75
Duplex 110 VT 2000 AD	AD9.980.40	1" F	110	660	4,4	234	1,1	40	3,3	138	200	16,5	47	37x186	53x100
Duplex 140 VT 2000 AD	AD9.985.40	1" F	140	840	5,6	234	1,4	52	4,2	176	300	21	59	41x186	62x106
Duplex 200 VT 2000 AD	AD9.990.40	1" F	200	1200	7	234	2	74	6	250	520	30	84	56x183	78x111

DUPLEX 110 M - 250 M

Duplex 110 M VT 2000 AD	AD9.982.40	2" M	110	660	4,4	240	1,1	40	3,3	138	200	16,5	41	37x190	53x100
Duplex 140 M VT 2000 AD	AD9.987.40	2" M	140	840	5,6	302	1,4	52	4,2	176	300	21	51	41x190	62x106
Duplex 200 M VT 2000 AD	AD9.990.80	2" M	200	1200	7	320	2	74	6	250	520	30	73	56x187	78x111
Duplex 250 M VT 2000 AD	AD9.991.60	2" M	250	1500	8,75	320	2,5	92	7,5	312	520	37,5	91	61x225	78x111

DUPLEX 200 B - 500 B

Duplex 200 B VT 2000 AD	AD9.991.40	2" M	200	1200	7	376	2	74	6	250	520	30	66	56x197	78x111
Duplex 250 B VT 2000 AD	AD9.991.80	2" M	250	1500	8,75	470	2,5	92	7,5	312	520	37,5	34	61x235	78x111
Duplex 320 B VT 2000 AD	AD9.992.40	2" M	320	1920	9,6	516	3,2	118	9,6	400	850	48	38	61x235	104x109
Duplex 500 B VT 2000 AD	AD9.994.40	2" M	500	3000	15	700	5	186	15	626	850	75	53	77x237	104x109

*Flow rate supplied without mixing bypass


Pressure: 2-6 bar; Water temperature: 5-30 °C; Ambient temperature: 5-40 °C

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Available timers

TIMER	POTABLE AND TECHNICAL USE
	Timer VT 2000 AD - Regeneration by time, volume, volume/time. With self disinfection and salt alarm.

Accessories

CODE	ITEM	ADAPTORS	MATERIAL
109.200.12	Adaptors	1½" F - ¾" M	PP
109.200.14	Adaptors (M models)	2" F - 1½" F	Brass
109.200.15	Adaptors (B models)	2 ¼" F - 2" M	Brass
109.200.30	Disinfection System - Junction box for resins disinfection (for old non-AD models)	—	—
600.070.10	Switch Kit R - Regeneration signal system for timers	—	—

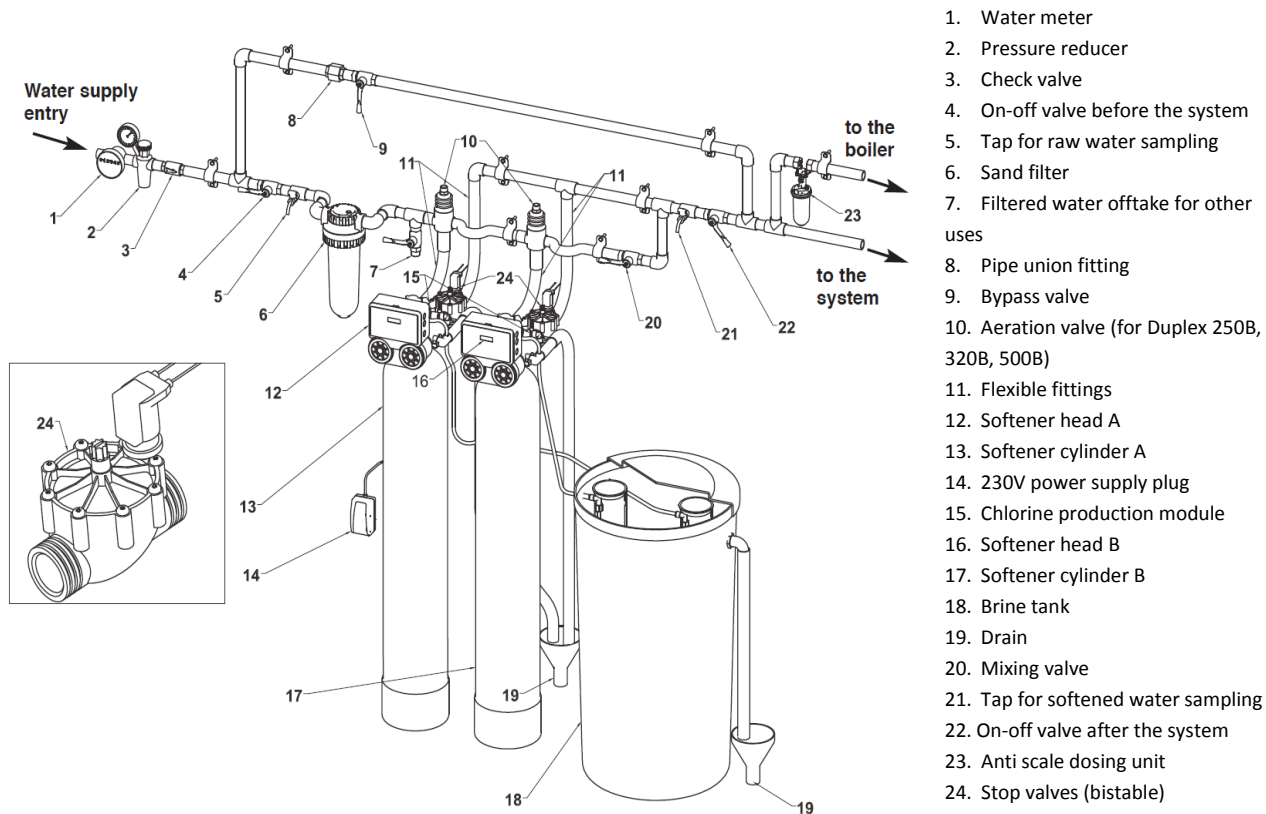
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Installation Diagram



PS. In models 200 B, 250 B, 320 B, 500 B, inlet and outlet are inverted

Description

Duplex. Ion exchange two column volumetric water softener* able to supply softened water 24 hours a day without a break. Programming and automatic control of resins regeneration by time, volume or volume/time. For potable and technical use. Manufactured with materials suitable for potable use. The supply consists of:

- No. 2 cylinders in plastic covered in fibreglass
- No. 2 heads made up of 2 hydropneumatic valves in plastic and electronic timer
- Brine tank
- Hardness kit
- Instruction manual

* Please refer to the chart "Technical Specifications" and "Available Timers" to choose the type of water softener.

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