

# MECHANIC GUIDE

## INDUSTRIAL AMMONIA, IRON- AND MANGANESE REMOVER, WATER SOFTENER EQUIPMENTS

BlueSoft N120EP/63	BlueSoft N120EA/63	BlueSoft N120EC/63
BlueSoft 1054EP/63	BlueSoft 1054EA/63	BlueSoft 1054EC/63
BlueSoft 1248EP/63	BlueSoft 1248EA/63	BlueSoft 1248EC/63
BlueSoft 1354EP/63	BlueSoft 1354EA/63	BlueSoft 1354EC/63
BlueSoft 1465EP/63	BlueSoft 1465EA/63	BlueSoft 1465EC/63
BlueSoft 1665EP/92	BlueSoft 1665EA/92	BlueSoft 1665EC/92
BlueSoft 2162EP/74	BlueSoft 2162EA/74	BlueSoft 2162EC/74
BlueSoft 2472EP/74	BlueSoft 2472EA/74	BlueSoft 2472EC/74
BlueSoft 3072EP/99	BlueSoft 3072EA/99	BlueSoft 3072EC/99
BlueSoft 3672EP/99	BlueSoft 3672EA/99	BlueSoft 3672EC/99
BlueSoft 4272EP/112	BlueSoft 4272EA/112	BlueSoft 4272EC/112
BlueSoft 4872EP/112	BlueSoft 4872EA/112	BlueSoft 4872EC/112
-	BlueSoft 1054EA-D3/73	BlueSoft 1054EC-D3/73
-	BlueSoft 1248EA-D3/73	BlueSoft 1248EC-D3/73
-	BlueSoft 1354EA-D3/73	BlueSoft 1354EC-D3/73
-	BlueSoft 1465EA-D3/73	BlueSoft 1465EC-D3/73
-	BlueSoft 2162EA-D3/88	BlueSoft 2162EC-D3/88
-	BlueSoft 2472EA-D3/88	BlueSoft 2472EC-D3/88
-	BlueSoft 3072EA-D3/88	BlueSoft 3072EC-D3/88

**Before using the equipment, read the whole user guide carefully!**

## TABLE OF CONTENTS

1. Definition and function
2. Technical parameters
3. Main parts
4. The way it works
5. Installation and startup
6. Instruction about handling
7. Measuring process of the water hardness
8. Warranty, guarantee
9. Installation data sheet
10. Warranty document
11. Quality Certificate

## 1. DEFINITION AND FUNCTION

1.1. The device is a column filled with a special filtrating material of excellent quality, which decreases the iron, manganese, ammonia, KOI, hardness values in the treated water to below the medical limit.

1.2. During its natural circulation, water dissolves numerous natural and artificial material. As iron is one of the elements which can be found the most frequently in minerals and in the soil, you can find dissolved iron in some extent in most of the natural waters. The presence of the dissolved iron in water causes different problems while using up water. So, for example, even in case of a concentration of 0,2 ppm Fe and 0,05 ppm Mn, there will be some deposit and discoloration on objects, which, apart from damages related to corrosion, will cause important esthetic damages as well. What is more, in case of a bit higher concentration, apart from the above mentioned damages, water will taste metallic, so the water will lose some of its physiological value. The device to remove iron stops iron and manganese deposit.

1.3. The water is in a natural circulation. The falling neutral pH content rainwater ties a part of the air's CO<sup>2</sup> content and this way it will become slightly acidic. After this the surface water and the water which leaks into the ground will release a part of the ground's component. Amongst these the between the released salt the calcium, magnesium has the highest appearance rate, while iron, manganese and several other element has a low ratio. The scaling is the process, where the salt that is being dissolved in water will release and this way inside the exothermal and the exothermic equipment they will fall-out to the wall's surface, they cause a pluggage and a severe thermal transmittance decadency. In case of increasing water temperature the process will run its course more intensley and because of this these devices will especially be in danger of scaling: boilers, central heating, hot water supply system's fittings and wire, washing machine etc.

## THE EQUIPMENT STOPS THE SCALING.

The base of the ion-exchanger water softener process is that the equipment changes the salt that is dissolved in water, calcium and manganese's ions to sodium ions. The sodium salt even for heating will not cause scaling.

1.4. Water resources ammonia's content under our home's surface which can come from release from rock or organic origin compound's decomposition. The ammonia which holds a dissociation balance with the ammonia ion is created from floral, animal and organic waste in ammonification processes with the effect of organic compound which contains nitrogen. In case of concentration over 0.5mg/l on the parts that contacts air, on the wall of pipes biofilms and in water in flake forms nitrification bacteriums can appear. The above mentioned bacterial process can even cause public health problems.

## 2. THE EQUIPMENT'S TECHNICAL PARAMETERS

Min. operating pressure	: 2,5bar
Max. operating pressure	: 6bar
Min. operating temperature	: 4C°
Max. operating temperature	: 25C°
Hardness	: Below 0,1 nk
Salinity	: Unchanged
pH value	: Unchanged
Regenerating chemical	: High purity NaCl tablet
Quantity	: 0,1 / ecomix liter columns/reg.
Electronic connection	: 230 V, 50 Hz

ECOMIX-A capacity = ECOMIX-A liter x 2.1

ECOMIX-C capacity = ECOMIX-C liter x 1.8

ECOMIX-P capacity = ECOMIX-P liter x 2.1

When calculating the capacity the hardness needs to be taken into account!

Regenerating: 100g NaCl / liter load

Water consumption: 4-6 water / liter load

The load's lifespan 3-10 years.

Operating properties:	ECOMIX-A	ECOMIX-C	ECOMIX-P*
Hardness:	<750mg/l CaCO <sub>3</sub>	<750mg/l CaCO <sub>3</sub>	<750mg/l CaCO <sub>3</sub>
Iron:	<15mg/l	<10mg/l	<15mg/l
Mangane:	<3mg/l	<3mg/l	<3mg/l
COD (KMnO <sub>4</sub> ):	<16mg/l	<80mg/l	<3mg/l
Ammonia:	<4mg/l	<4mg/l	-
TDS:	<4000mg/l	<4000mg/l	-
Operating temperature:	4–40 °C	4–40 °C	4–40 °C
pH:	5-10	5-10	5-10
Optimal bed height:	800mm	800mm	800mm
Volume flow rate:	20-25 m/h	20-25m/h	20-25m/h
Volume flow rate backwash (15-20min):	13-15m/h	13-15m/h	13-15m/h
Volume flow rate reg. (45-65 min):	3-5m/h	3-5m/h	3-5m/h
Volume flow rate wash. (15-20 min):	20-25m/h	20-25 m/h	20-25 m/h
Free bed capacity:	>40%	>40%	>40%

**The Ecomix-P filter media does not remove any organic materials (COD)!**

Always let the equipment's sizing to the expert. Depending on the raw water's quality, the removal of iron and mangane, and the equipment's operating parameters can drastically change from the above given parameters.

# Euro-Clear Ltd.

Tel: +36 96 544-240 • E-mail: [contact@euro-clear.eu](mailto:contact@euro-clear.eu) • Web: [www.euro-clear.eu](http://www.euro-clear.eu)

Part number	ECOMIX-A Liter/capacity.	Valve / Connection	Flow m <sup>3</sup> /h	Surface m <sup>2</sup>	Backwash volume	Weight kg	Brine tank volume	Size (mm) H x W x L
BlueSoft N120EA/63	25 / 52 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	1-1,2	0.05	0.75 m <sup>3</sup> /h	37	Built in	1150 x 520 x 340
BlueSoft 1054EA/63	37 / 77 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	1,1-1,3	0.05	0.75 m <sup>3</sup> /h	44	70 liter	1600 x 640 x 370
BlueSoft 1248EA/63	50 / 105 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	1,4-1,7	0.07	1.05 m <sup>3</sup> /h	56	70 liter	1450 x 690 x 370
BlueSoft 1354EA/63	62 / 130 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	1,6-2	0.08	1.2 m <sup>3</sup> /h	68	70 liter	1610 x 720 x 370
BlueSoft 1465EA/63	75 / 157 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	2-2,5	0.1	1.5 m <sup>3</sup> /h	85	145 liter	1890 x 740 x 370
BlueSoft 1665EA/92	100 / 210 m <sup>3</sup> x <sup>o</sup> dH	RX-92A-DVS 1"	2,6-3,2	0.13	1.95 m <sup>3</sup> /h	120	145 liter	1980 x 1110 x 560
BlueSoft 2162EA/74	150 / 315 m <sup>3</sup> x <sup>o</sup> dH	RX-74A-DVS 2"	4,4-5,5	0.22	3.3 m <sup>3</sup> /h	170	200 liter	1980 x 1110 x 560
BlueSoft 2472EA/74	225 / 472 m <sup>3</sup> x <sup>o</sup> dH	RX-74A-DVS 2"	5,6-7	0.28	4.2 m <sup>3</sup> /h	250	300 liter	1980 x 1110 x 560
BlueSoft 3072EA/99	350 / 735 m <sup>3</sup> x <sup>o</sup> dH	RX-99A-DVS 2"	8,8-11	0.44	6.6 m <sup>3</sup> /h	530	500 liter	1920 x 790 x 420
BlueSoft 3672EA/99	525 / 1102 m <sup>3</sup> x <sup>o</sup> dH	RX-99A-DVS 2"	12,8-16	0.64	9.6 m <sup>3</sup> /h	770	750 liter	1920 x 790 x 420
BlueSoft 4272EA/112	700 / 1470 m <sup>3</sup> x <sup>o</sup> dH	RX-112SM- DVS DN65	17,6-22	0.88	13.2 m <sup>3</sup> /h	1140	1000 liter	2470 x 2020 x 1080
BlueSoft 4872EA/112	900 / 1890 m <sup>3</sup> x <sup>o</sup> dH	RX-112SM- DVS DN65	22,4-28	1.12	16.8 m <sup>3</sup> /h	1500	1500 liter	2620 x 3300 x 1360

Part number	ECOMIX-C Liter/capacity.	Valve / Connection	Flow. m <sup>3</sup> /h	Surface. m <sup>2</sup>	Backwash volume	Weight kg	Brine tank volume	Size (mm) H x W x L
BlueSoft N120EC/63	25 / 45 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	1-1,2	0.05	0.75 m <sup>3</sup> /h	37	Built in	1150 x 520 x 340
BlueSoft 1054EC/63	37 / 66 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	1,1-1,3	0.05	0.75 m <sup>3</sup> /h	44	70 liter	1600 x 640 x 370
BlueSoft 1248EC/63	50 / 90 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	1,4-1,7	0.07	1.05 m <sup>3</sup> /h	56	70 liter	1450 x 690 x 370
BlueSoft 1354EC/63	62 / 111 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	1,6-2	0.08	1.2 m <sup>3</sup> /h	68	70 liter	1610 x 720 x 370
BlueSoft 1465EC/63	75 / 135 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	2-2,5	0.1	1.5 m <sup>3</sup> /h	85	145 liter	1890 x 740 x 370
BlueSoft 1665EC/92	100 / 180 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	2,6-3,2	0.13	1.95 m <sup>3</sup> /h	120	145 liter	1980 x 1110 x 560
BlueSoft 2162EC/74	150 / 270 m <sup>3</sup> x <sup>o</sup> dH	RX-74A-DVS 2"	4,4-5,5	0.22	3.3 m <sup>3</sup> /h	170	200 liter	1980 x 1110 x 560
BlueSoft 2472EC/74	225 / 410 m <sup>3</sup> x <sup>o</sup> dH	RX-74A-DVS 2"	5,6-7	0.28	4.2 m <sup>3</sup> /h	250	300 liter	1980 x 1110 x 560
BlueSoft 3072EC/99	350 / 630 m <sup>3</sup> x <sup>o</sup> dH	RX-99A-DVS 2"	8,8-11	0.44	6.6 m <sup>3</sup> /h	530	500 liter	1980 x 1110 x 560
BlueSoft 3672EC/99	525 / 945 m <sup>3</sup> x <sup>o</sup> dH	RX-99A-DVS 2"	12,8-16	0.64	9.6 m <sup>3</sup> /h	770	750 liter	1980 x 1110 x 560
BlueSoft 4272EC/112	700 / 1260 m <sup>3</sup> x <sup>o</sup> dH	RX-112SM- DVS DN65	17,6-22	0.88	13.2 m <sup>3</sup> /h	1140	1000 liter	2470 x 2020 x 1080
BlueSoft 4872EC/112	900 / 1620 m <sup>3</sup> x <sup>o</sup> dH	RX-112SM- DVS DN65	22,4-28	1.12	16.8 m <sup>3</sup> /h	1500	1500 liter	2620 x 3300 x 1360

# Euro-Clear Ltd.

Tel: +36 96 544-240 • E-mail: [contact@euro-clear.eu](mailto:contact@euro-clear.eu) • Web: [www.euro-clear.eu](http://www.euro-clear.eu)

Part number	ECOMIX-A Liter/capacity.	Valve / Connection	Flow m <sup>3</sup> /h	Surface m <sup>2</sup>	Backwash volume	Weight kg	Brine tank volume	Size (mm) H x W x L
BlueSoft N120EP/63	25 / 52 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	1-1,2	0.05	0.75 m <sup>3</sup> /h	37	Built in	1150 x 520 x 340
BlueSoft 1054EP/63	37 / 77 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	1,1-1,3	0.05	0.75 m <sup>3</sup> /h	44	70 liter	1600 x 640 x 370
BlueSoft 1248EP/63	50 / 105 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	1,4-1,7	0.07	1.05 m <sup>3</sup> /h	56	70 liter	1450 x 690 x 370
BlueSoft 1354EP/63	62 / 130 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	1,6-2	0.08	1.2 m <sup>3</sup> /h	68	70 liter	1610 x 720 x 370
BlueSoft 1465EP/63	75 / 157 m <sup>3</sup> x <sup>o</sup> dH	RX-63C-DVS 1"	2-2,5	0.1	1.5 m <sup>3</sup> /h	85	145 liter	1890 x 740 x 370
BlueSoft 1665EP/92	100 / 210 m <sup>3</sup> x <sup>o</sup> dH	RX-92A-DVS 1"	2,6-3,2	0.13	1.95 m <sup>3</sup> /h	120	145 liter	1980 x 1110 x 560
BlueSoft 2162EP/74	150 / 315 m <sup>3</sup> x <sup>o</sup> dH	RX-74A-DVS 2"	4,4-5,5	0.22	3.3 m <sup>3</sup> /h	170	200 liter	1980 x 1110 x 560
BlueSoft 2472EP/74	225 / 472 m <sup>3</sup> x <sup>o</sup> dH	RX-74A-DVS 2"	5,6-7	0.28	4.2 m <sup>3</sup> /h	250	300 liter	1980 x 1110 x 560
BlueSoft 3072EP/99	350 / 735 m <sup>3</sup> x <sup>o</sup> dH	RX-99A-DVS 2"	8,8-11	0.44	6.6 m <sup>3</sup> /h	530	500 liter	1920 x 790 x 420
BlueSoft 3672EP/99	525 / 1102 m <sup>3</sup> x <sup>o</sup> dH	RX-99A-DVS 2"	12,8-16	0.64	9.6 m <sup>3</sup> /h	770	750 liter	1920 x 790 x 420
BlueSoft 4272EP/112	700 / 1470 m <sup>3</sup> x <sup>o</sup> dH	RX-112SM- DVS DN65	17,6-22	0.88	13.2 m <sup>3</sup> /h	1140	1000 liter	2470 x 2020 x 1080
BlueSoft 4872EP/112	900 / 1890 m <sup>3</sup> x <sup>o</sup> dH	RX-112SM- DVS DN65	22,4-28	1.12	16.8 m <sup>3</sup> /h	1500	1500 liter	2620 x 3300 x 1360

Part number	ECOMIX-A Liter/capacity	Valve / Connection	Flow m <sup>3</sup> /h	Surface. m <sup>2</sup>	Backwash volume	Weight kg	Brine tank volume	Size (mm) H x W x L
BlueSoft 1054EA-D3/73	2x37 / 2x77 m <sup>3</sup> x <sup>o</sup> dH	RX-73A-DVS 1"	1,1- 1,3	0.05	0.75 m <sup>3</sup> /h	120	70 liter	1580 x 700 x 850
BlueSoft 1248EA-D3/73	2x50 / 2x105 m <sup>3</sup> x <sup>o</sup> dH	RX-73A-DVS 1"	1,4- 1,7	0.07	1.05 m <sup>3</sup> /h	130	145 liter	1430 x 830 x 870
BlueSoft 1354EA-D3/73	2x62 / 2x130 m <sup>3</sup> x <sup>o</sup> dH	RX-73A-DVS 1"	1,6-2	0.08	1.2 m <sup>3</sup> /h	160	145 liter	1600 x 860 x 890
BlueSoft 1465EA-D3/73	2x75 / 2x157 m <sup>3</sup> x <sup>o</sup> dH	RX-73A-DVS 1"	2-2,5	0.1	1.5 m <sup>3</sup> /h	200	200 liter	1870 x 920 x 940
BlueSoft 2162EA-D3/88	2x150 / 2x315 m <sup>3</sup> x <sup>o</sup> dH	RX-88A-DVS 6/4"	4,4- 5,5	0.22	3.3 m <sup>3</sup> /h	450	350 liter	1940 x 2000 x 740
BlueSoft 2472EA-D3/88	2x225 / 2x472 m <sup>3</sup> x <sup>o</sup> dH	RX-88A-DVS 6/4"	5,6-7	0.28	4.2 m <sup>3</sup> /h	640	500 liter	2140 x 2160 x 840
BlueSoft 3072EA-D3/88	2x350 / 2x735 m <sup>3</sup> x <sup>o</sup> dH	RX-88A-DVS 6/4"	8,8-10	0.44	6.6 m <sup>3</sup> /h	1060	750 liter	2360 x 2330 x 960

Part number	ECOMIX-C Liter/capacity	Valve / Connection	Flow m <sup>3</sup> /h	Surface. m <sup>2</sup>	Backwash volume	Weight kg	Brine tank volume	Size (mm) H x W x L
BlueSoft 1054EC- D3/73	2x37 / 2x66 m <sup>3</sup> x°dH	RX-73A-DVS 1"	1,1-1,3	0.05	0.75 m <sup>3</sup> /h	120	70 liter	1580 x 700 x 850
BlueSoft 1248EC- D3/73	2x50 / 2x90 m <sup>3</sup> x°dH	RX-73A-DVS 1"	1,4-1,7	0.07	1.05 m <sup>3</sup> /h	130	145 liter	1430 x 830 x 870
BlueSoft 1354EC- D3/73	2x62 / 2x111 m <sup>3</sup> x°dH	RX-73A-DVS 1"	1,6-2	0.08	1.2 m <sup>3</sup> /h	160	145 liter	1600 x 860 x 890
BlueSoft 1465EC- D3/73	2x75 / 2x135 m <sup>3</sup> x°dH	RX-73A-DVS 1"	2-2,5	0.1	1.5 m <sup>3</sup> /h	200	200 liter	1870 x 920 x 940
BlueSoft 2162EC- D3/88	2x150 / 2x270 m <sup>3</sup> x°dH	RX-88A-DVS 6/4"	4,4-5,5	0.22	3.3 m <sup>3</sup> /h	450	350 liter	1940 x 2000 x 740
BlueSoft 2472EC- D3/88	2x225 / 2x410 m <sup>3</sup> x°dH	RX-88A-DVS 6/4"	5,6-7	0.28	4.2 m <sup>3</sup> /h	640	500 liter	2140 x 2160 x 840
BlueSoft 3072EC- D3/88	2x350 / 2x630 m <sup>3</sup> x°dH	RX-88A-DVS 6/4"	8,8-10	0.44	6.6 m <sup>3</sup> /h	1060	750 liter	2360 x 2330 x 960

### 3. THE MAIN PARTS OF THE DEVICE

The iron and manganese remover mainly consists of the following parts:

#### 3.1. Tank to filter

It is meant to store the catalytic charge. The columns are PE pressure tanks developed especially for treating water with polyethylene padding. Outside they have epoxy resin coat rolled by fibre.

Their features are that they last long, have little weight and resist to chemicals and corrosion.

#### 3.2. Charge to remove iron

It is meant to put into effect the device's basic chemical processes on the charge bed.

#### 3.3. Blocked valve to regenerate

It is meant to make sure that the mechanical operational processes of the device are completed in a programmed, regulated way.

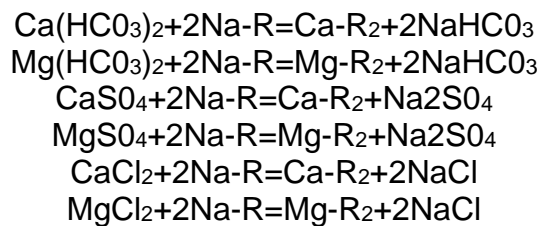
#### 3.4. Brine tank

It is meant to manufacture the required saline solution for the regenerating and store the regenerating salt.

## 4. HOW IT WORKS

### 4.1. CHEMICAL FUNCTION

The base of the equipment's chemical function is the loaded ion changer synthetic resin's ion changer property. This property of the resin is thanks to the neutral polystyrene carrier, and active groups which has free valence. This compound has relatively small affinity to sodium and big to calcium and magnesium. During operation the ion changer synthetic resin which is loaded with sodium is continuously changing magnesium ions to sodium ion. This process is basically water softening, which continues until the resin's active groups have sodium.



If during operation the ion changer resin will get saturated with calcium and magnesium, then the resin will be considered out of charge.

The out of charge resin have to be regenerated. During regeneration from the resin's active groups the calcium and magnesium ions will get forced down and to their place we will plant sodium ion. Because of the different affinity this process can only occur when significant sodium excess is created. In practise, during regeneration on the ion changer resin we circulate a 10% NaCl liquid mixture. From the liquid mixture the sodium will be connected to the resin's active groups, the forced down calcium and magnesium while connected to the chloride ion with the regeneratum will get to the channel.

The filter media reduces the water, iron, manganese, ammonium and hydrogen sulfide content.

**The filter's appropriate back washing is really important because of the bed expansion and long lifespan.**

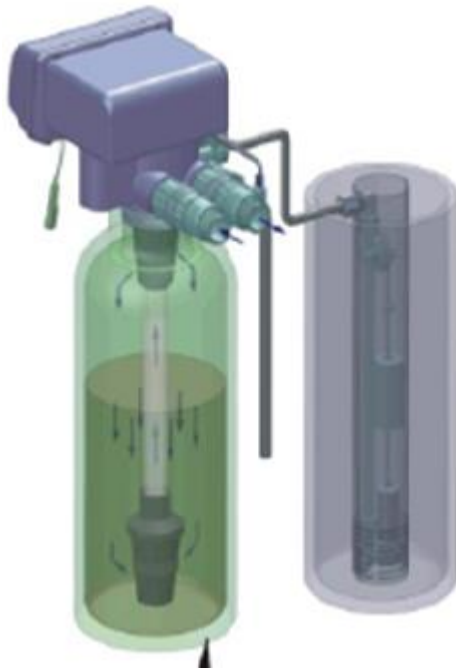
### 4.2. THE EQUIPMENT'S MECHANICAL OPERATION

While the device is operating, the mechanical operation of the blocked valve ensures the automatic performance of the water production and regeneration processes.

#### 4.2.1. WATER PRODUCTION

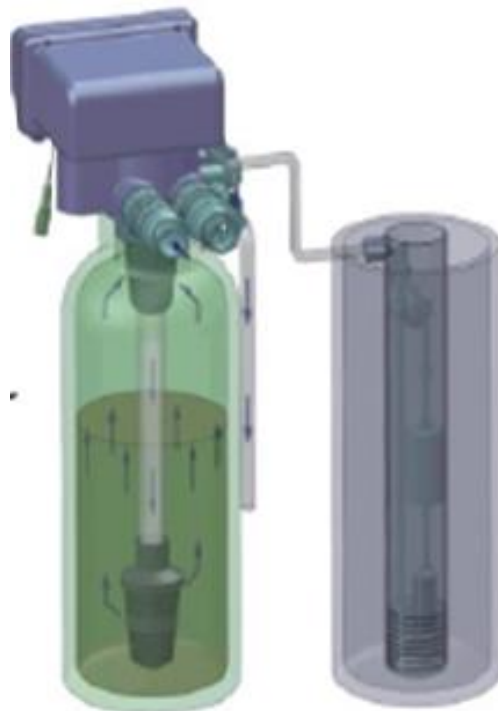
During water production, the water gets into the column through the upper filter and it flows through the charge to remove iron from up to down while the divalent iron ions get oxidized and filtrated. The iron free water gets out of the device through the lower filter.





## 4.2.2. BACKWASH

During backwash the water gets into the column through the lower filter and it flows through the charge from down to up. Meanwhile, the filtrating charge gets stirred up and the iron residual gets removed. The water for backwash gets out into the channel through the drain.



## 4.2.3. BRINE SUCTION

Through the waterjet pump which is placed into a blocked valve, the water pumps up saturated saline from the brine tank and dilutes it to around 10%. This liquid mixture comes in to the resin keeper column through the filter and on the resin filling going from up do down it is flowing. During flowing the resin filling's regeneration will happen. The regeneration's waste water leaves through the lower filter, and the waste water leaves through to output to the channel.



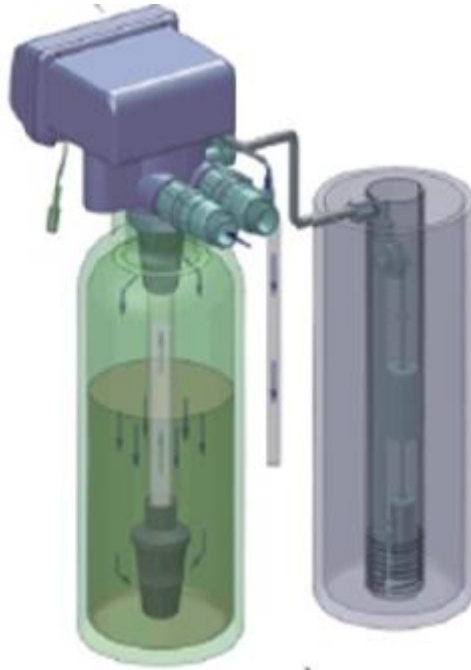
## 4.2.4. BRINE TANK'S FILLING

The water gets to the brine tank through the salt suction wire. The backfilling is time-controlled. The back-loaded water makes a saturated saline with salt tablet that is found in the brine tank and at the next regeneration process it will get used.



## 4.2.5. QUICK WASHING

During quick washing the water comes in from the lower filter to the resin holder column and it flows from down to up on the resin filling. Through the upper filter, the waste water leaves through the output to the channel. During quick washing the chemical mark's removing and the appropriate water quality's set up will happen.



## 4.3. OVERAL DESCRIPTION OF CONTROL OPERATION

The automatic blocked valve is solely time controlled during the operation and all the other working processes. There is an electronic clock for metering time. Apart from metering time, this clock gets the mechanism of the blocked valve to work. The block valve's structure and settings are according to the attachment.

## 5. INSTALLATION AND SETTING-UP OF THE EQUIPMENT

### 5.1. CONDITIONS OF THE INSTALLATION

A room with flat, horizontal and hard flooring is needed for the installation of the device. The flooring and the direct surroundings of the device must resist to the corrosive effect of the brine. The device must be installed in a room the temperature of which is between +5°C to +40°C. The temperature of the raw water to be treated must not exceed +30 °C. The device must not be installed in a strongly damp or dusty room. It must be protected from frost, radiant heat and ultraviolet radiance.

Near the device, sewage connection and 230 V 50 Hz grounded, electric socket

must be provided. In order to diminish risks, we advise to install the device into a room provided with floor drainage.

Below water pressure of 2,5 bars, proper regeneration is not guaranteed, so in this case we advise to build in a device to increase pressure.

In case the water pressure from the water system exceeds 6 bars, a device to decrease pressure has to be fixed in front of the device.

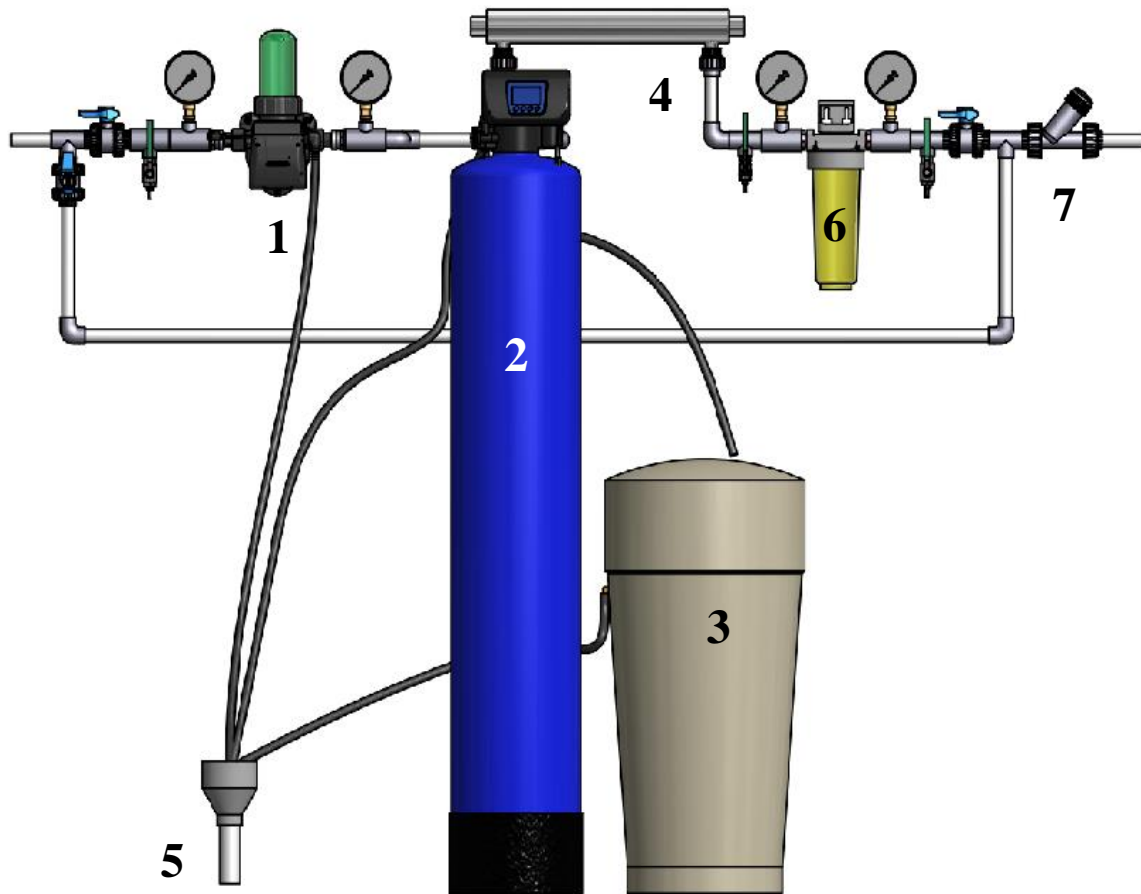
Fluctuation of pressure higher than  $\pm 0,5$  bar is not allowed! Mechanical protective filter must be built in front of the device. It is important that the mechanical protective filter filtrates contamination bigger than 100 microns.

The device does not have any extra protection against water or electricity shortage. If needed, it must be provided while installing.

## **5.2. CONNECTING THE DEVICE (it is the customer's/owner's job)**

It is the customer's task to have the device connected to the water, sewage and electricity systems. The operator of the device and the specialist to complete the installation should both check if the device has been installed as described in the guide for use and handling and if the conditions to diminish risks of damage are given. The setting up of the device can be completed by the partner of the Euro-Clear Ltd's service that has a partnership contract. Setting up the device only means the setting up of the automatical control valve fulfilling the local conditions.

When fitting, the valid local regulations, general instructions and hygiene regulations must be followed and the technical parameters given above must be respected.



1. DFA-34A type prefilter equipment
2. BS-1054EA/63 tpye water treatment equipment
3. Brine tank
4. Aquaz-S5Q type UV equipment
5. Waste water disposal system
6. Afterfilter with activated carbon filler
7. Non-return valve

To defend the water treatment equipment, in every case a mechanical prefilter's installation is mandatory. On the connection of the water treatment's connection, you have to be careful about the water flowing's direction, which are marked by the control unit connection arrows. On the control unit there is a hose plug, this is the equipment's waste water output. The leaving waste water needs to be led to a sewer. This task can be done with a plastic hose. It is important that the hose should be pressure-tight, because the simple garden hose will be broken in time, and the narrowed cross section will endanger the regenerating. The waste water will be leaving the equipment during pressure, but the waste disposal system has to be executed with free outflow. Near the equipment a 230V, 50HZ electronic connection has to be built with a distance that the plug's connection can be solved without the electronic wire's strain.

From the number 1 prefilter's equipment water will be leaving during back-washing. The waste water's connection snag is suggested to be tied to the sinker. In this case the waste water will be leaving during pressure.

On the water softener equipment's regenerating tank's side an overflow snag can be found. In case of malfunction the unnecessary water will be leaving. It has a hydrostatic pressure from the liquid's weight, because of this it can only be diverted by floor dran or lowly placed siphon drain.

The tank's safety overflow snag can be diverted to the sewage connection point with the help of ½" pressure-tight plastic tube. The possible leaving water does not have pressure, and because of this, it has to be wired to the sewage with a slope, or it has to be led to the lifting. The water softener equipment's operational waste water's output and the brine tank's overflow has to be connected to the disposal of sewage with the following rules:

- According to DIN 1988 in favor of the free drain the flush water and the overflow wire on the waste water's connection point, these have to be stabilized compared to the waste water level with the distance of min. 20mm.



- Pay attention, that the water softener's sewage pipes and the brine's overflowing wire has to be connected separately to the sewage. The outflowing high pressure flush water from the control unit during regeneration can not get to the brine tank.

### 5.3. SETTING UP OF THE EQUIPMENT

After the jobs mentioned in point 5.2 have been completed, you have to order the setting up of the machine from Euro-Clear Ltd at one of the contact details below:

Adress: 9071 Gönyű, Béke utca 2

E-mail: [contact@euro-clear.eu](mailto:contact@euro-clear.eu)

[www.euro-clear.eu](http://www.euro-clear.eu)

After the device has been set up, the copy of the warranty document filled in by the person having completed the setting up has to be sent to the address above in a verifiable way.

The fee of the setting up jobs gets calculated on the basis of the actual price list.

## 6. INSTRUCTIONS FOR HANDLING

### 1./ Check daily

- The hardness of the incoming water
- The hardness of the softened water, iron- manganese-, ammonium content és and it has to be documented in the operating log.

### 2./ Check daily

- If necessary refilling has to be done in the brine's tank with regenerating salt, also has to be documented in the operating log.

3./ In every case there has to be one undissolved solid salt tablet in the brine tank for regeneration

4./ Continuously check the brine consumption, because from this you can conclude if the equipment is regenerating automatically or not.

5./ Check daily the pressure of the incoming water on the pressure gauge. In case the pressure decreases by more than 0,5 bars, clean the pre-filter.

6./ Dedust the device with a dry cloth every two weeks.

7./ The pre-filtering device must be rinsed back depending on the extent of the contamination but at least once a week. It must be done with the sewage water drain tap that you can find on the bottom of the device. Rinsing back must last for at least 15-20 seconds.

8./ Once a month clean the brine dissolving tank.

9./ Make sure that the device keeps getting 230 V, 50 Hz electricity all the time, for 24 hours and it is under system pressure continuously.

## 7. WATER HARDNESS MEASUREMENT

The hardness test kit consists of 1 measuring vessel and 1 plastic vial containing titrating liquid.

- Before the test, rinse the measuring container and fill up to the 5 ml mark with the water sample to be tested. Add a drop of titrating liquid to the water sample in the vessel and mix thoroughly with gentle shaking.

- If the first drop of titrating liquid turns the water greenish, the test water is soft water. Otherwise, repeat the process until the red color of the mixture changes to green. Each drop of titration liquid represents 1 nk °, so that the hardness of the water sample examined is the same as the number of drops added until greenish discoloration.

- When filled to a level of 10 ml, the dish can be measured in 0.5 degrees increments according to the above method. In this case, 1 drop of titrating liquid means 0.5 nk °

## 8. WARRANTY, GUARANTEE

In case of non-performance by the producer, the owner of the device can benefit from all warranty rights in 306-309. § in the Civil Code.

The owner of the device can claim for warranty and guarantee only by showing both the receipt that has been received when buying the device and that proves the payment of the complete price and the warranty document that has been filled in.

Warranty and guarantee do not cover faults that have been caused by the following:

- The product has not been used properly, the instructions of the way of handling, using, installing or maintaining etc. have not been respected
- The operation diary has not been kept
- the necessary corrective maintenance has not been completed, or has not been done by the designated professional servicing company,
- the product's nature has been transformed, changed
- the owner of the equipment has not completed their liability of reducing risks of damage
- Defects, damages and other problems caused by improper transportation and storage of the product.

Warranty and guarantee claims can be validated only in case the operator of the device sends to the producer both pages of the operation data sheet filled in and signed by the professional mechanic in charge of setting up of the device. It must be sent in a provable way!

Please send back to the address below both pages of the data sheet of setting up that have been filled in and signed:

Euro-Clear Ltd.

Mailing address: 9071 Gönyű, Béke utca 2

E-mail: [contact@euro-clear.eu](mailto:contact@euro-clear.eu)



## INSTALLATION DATA SHEET

Name of the expert who will do the installation: .....

Contacts of the expert who will do the installation:

- Mailing adress: .....
- Phone number: .....
- E-mail adress: .....

Distributor company's name: .....

- Mail adress: .....
- Phone number: .....
- E-mail adress: .....

Name of the equipment's operator: .....

- Mailing adress: .....
- Phone number: .....
- E-mail adress: .....

Installed equipment's type: BlueSoft .....

Date of the installation: .....

.....  
**signature, stamp**

**The warranty and the guarantee are only valid if the installation was done by Euro-Clear Ltd or one of it's accredited expert. The equipment's installation can be ordered from the following contacts:**

Euro-Clear Ltd.  
9071 Gönyű, Béke utca 2  
Tel: +3696/544-240  
email: [contact@euro-clear.eu](mailto:contact@euro-clear.eu)

## Data sheet for setting up

- |  | Yes                      |
|--|--------------------------|
| 1. Check the mechanical and electricity connections as follows:  |                          |
| 1.1. Is a mechanical protection filter build in front of the device?   | <input type="checkbox"/> |
| 1.2. Is the pressure of the raw water convenient? (2,5 – 6 bar)  | <input type="checkbox"/> |
| 1.3. Are the directions of water flow convenient? (on the montage block, on the device)  | <input type="checkbox"/> |
| 1.4. Are the softening rinsing water's connection and the brine tank's gravity's overflow wired to seperate channels?  | <input type="checkbox"/> |
| 1.5. Is the electricity input right? (230V, 50HZ)  | <input type="checkbox"/> |
| 1.6. Did the measure of the raw water's hardness happen?   | <input type="checkbox"/> |
| If yes, then the value is:   | .....nk <sup>0</sup>     |
| 2. Program the water softener equipment's control head   |                          |
| 2.1. Have the exact date and time been set?  | <input type="checkbox"/> |
| 2.2. Setting the regeneration time or the quantity value   | <input type="checkbox"/> |
| 2.2.1. In case the equipment is time controlled, has the time between the two washings been set up?  | <input type="checkbox"/> |
| If yes, then the value is:   | ..... days               |
| 2.2.2. In the case of a volume-controlled device, did happen the set up the amount of water between the two regenerations (in m3)?   | <input type="checkbox"/> |
| If yes, the value is?:   | ..... m <sup>3</sup>     |
| 2.3. Backfilling of the water to the brine tank  |                          |
| Start a manual regeneration. Overgo these cycles: back-washing, salt suction, until the water backfilling cycle. Water backfilling cycle time's adjustment, so the appropriate amount of water can be in the cabinet. Backfilled quantity of the water = resin liter X 0.6 (liter) |                          |
| Is the backfilled quantity of the water appropriate?   | <input type="checkbox"/> |
| 2.4. Setting washing times (advanced settings)   |                          |
| 2.4.1. Backwash (Backwash) Has the time been set up?   | <input type="checkbox"/> |
| 2.4.2. Brune suction (Brine Draw) Has the time been set up?  | <input type="checkbox"/> |
| 2.4.3. Rinse (Rinse) Has the time been set up?   | <input type="checkbox"/> |
| 2.4.4. Water refilling (Refill) Has the time been set up?  | <input type="checkbox"/> |
| 2.4.5. Regeneration mode (Regeneration Mode) selection:  |                          |
| time (Timer)   | <input type="checkbox"/> |
| immediate (Meter immediately)  | <input type="checkbox"/> |
| delayed quantity (Meter delayed)   | <input type="checkbox"/> |
| 3. Starting the manual regeneration, checking the operational cycles   |                          |
| 3.1. Backwash (the water is coming for the channel intensively)  |                          |
| Was everything all right with the operation cycle?   | <input type="checkbox"/> |
| 3.2. Brine suction (small amount of water is leaving for the channel, from the brine tank the brine is decreasing)   |                          |
| Was everything all right with the operation cycle?   | <input type="checkbox"/> |
| 3.3. Water refilling to the brine tank. Was everything all right with the operation cycle?   | <input type="checkbox"/> |
| 3.4. Backwash (bigger flow to the channel)   | <input type="checkbox"/> |
| 4. After regenerating, check the iron and manganese content of the water that comes out from the equipment.  |                          |
| Without backwash, is the supplied water's hardness of the equipment below 1nk <sup>0</sup> ?   | <input type="checkbox"/> |
| 5. Set the hardness value to 5/2023. According to the government decree to minimum 5nk <sup>0</sup> . (The equipment is able to provide lower nk <sup>0</sup> water). Possible versions of setting the hardness: With the help of montage block or by-pass valve.                  |                          |
| The value of the water's hardness:   | .....nk <sup>0</sup>     |
| 6. Filling the brine tank with pelletiser salt. The advised quantity is min. the daily salt need.  | <input type="checkbox"/> |
| 7. Train the staff that are handling the equipment.  | <input type="checkbox"/> |
| 8. Filling the warranty document.  | <input type="checkbox"/> |

## WARRANTY DOCUMENT

In case the device is properly used, the producer undertakes a warranty of **12 months** starting from the setting up, but maximum **18 months** starting from the date of issuing the quality certificate.

**DATE OF SETTING UP:**

.....

.....

**signature, stamp**

**The warranty and guarantee are only valid in case the setting up has been completed by Euro-Clear Ltd. or its agent. You can order the setting up of the device at the details mentioned below.**

**Please send us back the warranty document, setting up data sheet completely filled. In other case the warranty is not valid.**

**Please keep the warranty document, setting up data sheet and quality certificate for administration purposes in the future.**

In case of a breakdown or fault, please inform us in written at the e-mail address [contact@euro-clear.eu](mailto:contact@euro-clear.eu) about the problem that has occurred.

## QUALITY CERTIFICATE

<b>1. Issuer of the quality certificate:</b> Euro-Clear Ltd.	<b>2. Producer:</b> Euro-Clear Ltd.	
<b>3. Punctual name of product (its function):</b> Automatical iron and manganese remover <span style="float: right;">Type: BlueSoft.....</span>		
<b>4. Quantity</b>  1	<b>5. Weight and (or) size:</b>	<b>6. Date of production:</b>  .....
<b>7. Can be used</b>	<b>8. Identifying product</b> a./ Control valve number: b./ ITJ-number: c./ Part number: d./ Other identifying details:	
<b>9. Delivery and storage regulations:</b> Transportation and storage must be done in standing position. Store in a dry, cool place, away from water and precipitation. Do not expose to direct sunlight or UV radiation. Extremely frost-hazardous.	<b>10. Wrapping:</b> Cardboard.	
<b>11. Important features of the product (with punctual technical data, results of measurement):</b>  Flow of volume: .....m <sup>3</sup> /hour Volume of charge: .....litre  <b>Quality and classifying: Convenient!</b>		
<b>14. Other details:</b> Serial number:	<b>12. Method of inspection for checking the quality of the product:</b> During production	
	<b>13. Regulation for use and handling:</b> As it is mentioned in the guide for use and handling	
	<b>15. Signature of the person issuing the quality certificate:</b>	
	Date: Gönyű, 20.....  ..... <b>signature, stamp</b>	