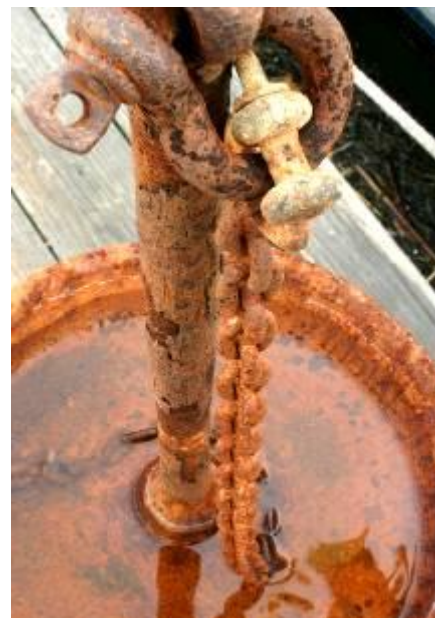


How to Remove Hardness, Iron, Manganese, NOM and Ammonia with a single filter

IRON, Manganese,
Hardness, Natural
Organic Matter and
Ammonia in well water

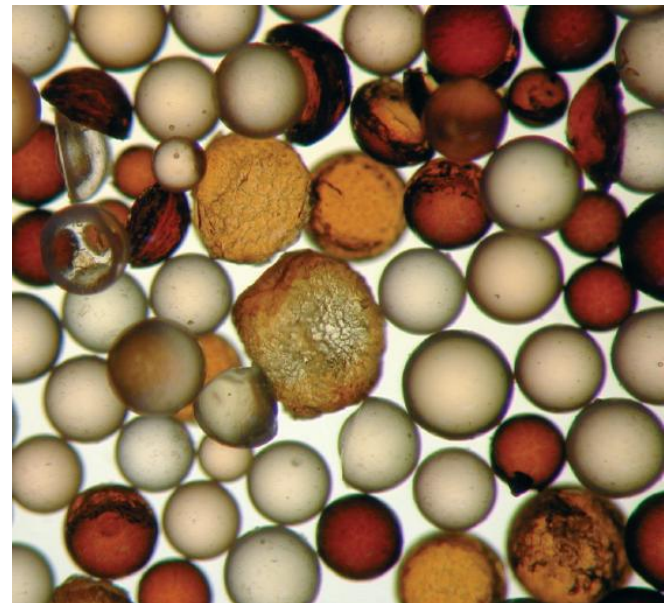
**OFTEN COME
TOGETHER**



Advanced multi-purpose softening media for problem water

Removes

- Hardness
- Iron
- Manganese
- NOM
- Ammonia



Main technical features

- Removes ferrous, ferric, colloidal, organic iron and manganese
- Removes NOM
- Works at low TDS, low hardness and high H_2S
- Works in normal softeners
- The highest Fe and Mn limits



The most popular Ecomix systems



Ecomix 1035 Cab
Small house
1 bath



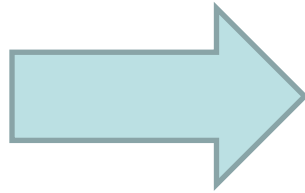
Ecomix 1054
Medium house
1-2 baths



Ecomix 1252
Large house with
2-3 baths

Conventional technology

Traditionally



Catalytic
media



Cation
resins



Activated
carbon

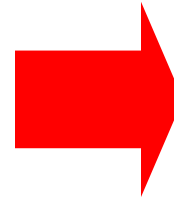


Zeolite.

- Detailed water analysis required
- Low efficiency
- Expensive
- High service demand

Multi-purpose media

In 1999 ECOMIX multipurpose media was developed to solve all the problems in a single filter



Complications

- Does not remove NOM and organic iron
- Sensitive to TDS, hardness, H₂S and organics
- Slow kinetic (high salt consumption, long brining)
- Limited Fe and Mn removal



Complications

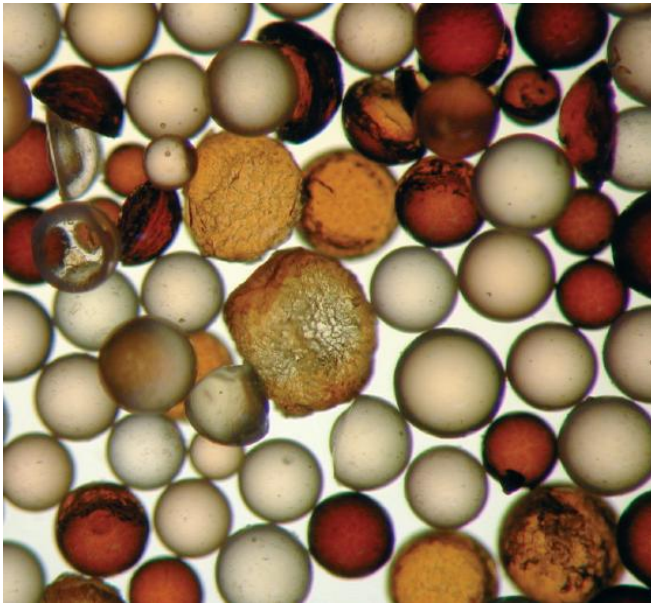
Every water needs a specific mixture

Anions must be taken into account

Iron and NOM fouling occurs



What is ECOMIX multi-purpose media?



Media is a mixture
of ion exchange and
adsorption
materials of various
nature

Ecomix media



Inert material for iron removal and flow arrangement during backwash

Modified adsorbent for Fe and Mn removal

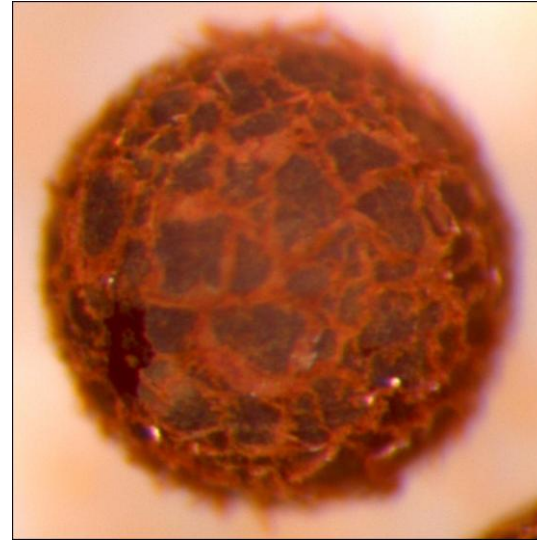
Modified adsorbent for NOM removal

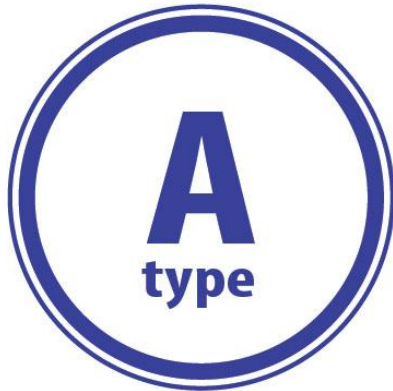
Low-crosslinked cation resin

Quartz support bed

How it works:

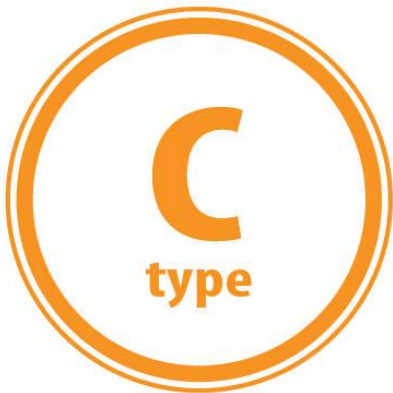
- ion-exchange
- adsorption
- catalytic
- contact coagulation





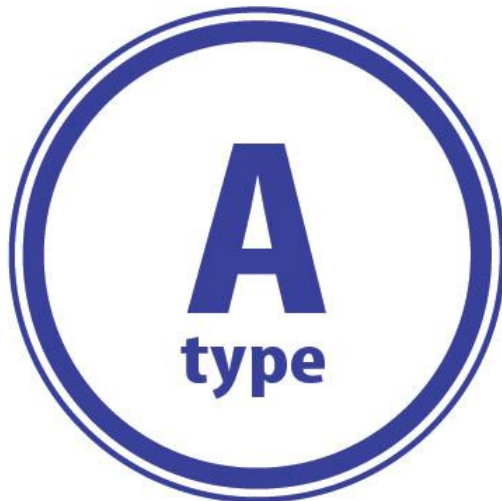
Two types of the media are available:

- «4-in-1» - for common problem water more popular, effective in **hardness, iron, manganese and ammonia removal**. It removes 50% of organic matter.
-



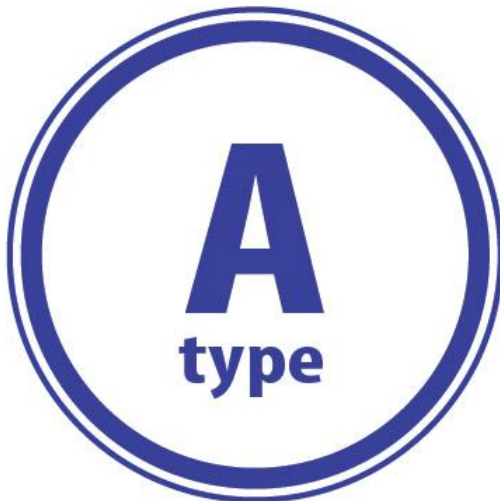
- «5-in-1» - for high COD problem water is recommended when besides 4 main contaminants significant reduction of organic content is necessary.

SPECIFICATIONS



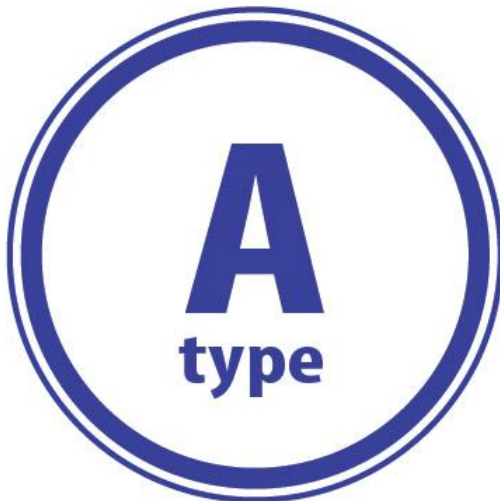
Shipping weight	0,8 kg/l	50 lbs/cu ft
Maximum operation temperature	40 °C	105 °F
pH	5 - 9	
Minimal bed depth	500 mm	20 in.
Optimal bed pedth	800 mm	32 in.

SPECIFICATIONS



Flow rate	gpm/sq.ft	m/h
service	8 - 10	20 - 25
backwash (10 - 15 min)	4 - 6	10 - 15
brine (45 - 60 min)	1 - 2	3 - 5
rinse (5 - 10 min)	4 - 6	10 - 15

SPECIFICATIONS



Free bed volume

> 40%

**Water consumption
for regeneration,
bed volumes**

4 - 6

**Regeneration
solution NaCl**

10 - 8 %

Concentration limits

Concentration limits	Hardness		Iron	Manganese	COD	Ammonia
	gpg	ppm CaCO_3	ppm	ppm	ppm O_2	ppm
	45	750	15	3	20	4

Removal efficiency	Type A				50%	
	Type C	97%	98%	98%	80%	90%

ONLY HARDNESS

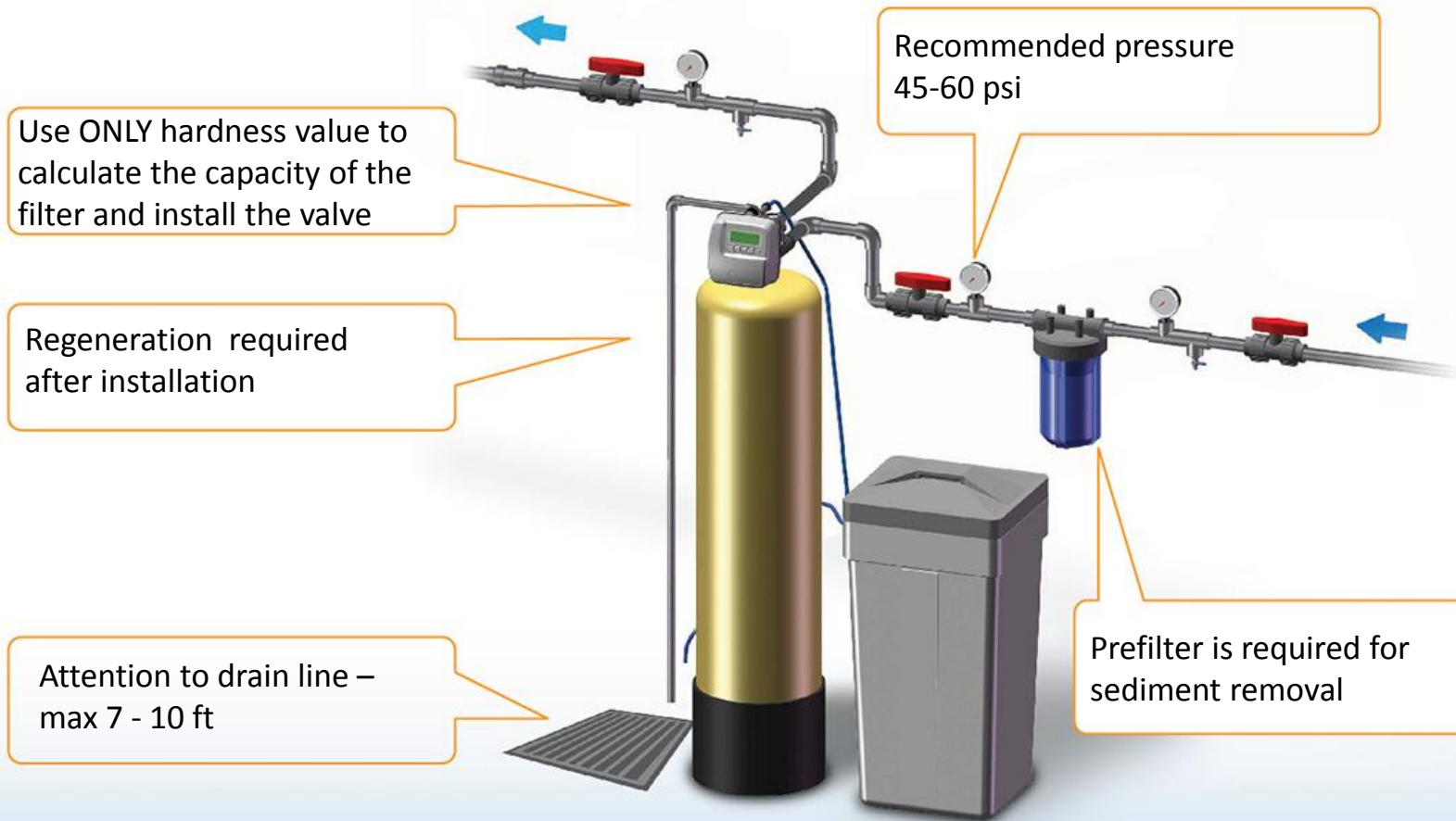
TYPE A 15 200 grains/cu ft (35,0 gCaCO₃/l)

TYPE C 13 100 grains/cu ft (30,0 gCaCO₃/l)

SALT AS LOW AS

6,20 lbs per 1 cu ft of media

Multi-purpose media system installation



Main features

- Removes hardness, iron, manganese, NOM and ammonia
- Works with ferrous, ferric, colloidal and organic iron
- Universal media for wide range of problem waters
- Is applied in normal softeners
- Operates at low TDS, low hardness, high H₂S, high COD

Main figures

- Service life – up to 10 years
- Warranty – 2 years
- Maximum Fe limit – 15 ppm
- Maximum Mn limit – 3 ppm
- Low salt consumption – 6,2 lbs NaCl per 1 cu ft
- Low drain water volume – 70 gallons per 1 cu ft

Summary

Over
6 years
of research

1998

Media is created
and patented

More than
80
materials
tested

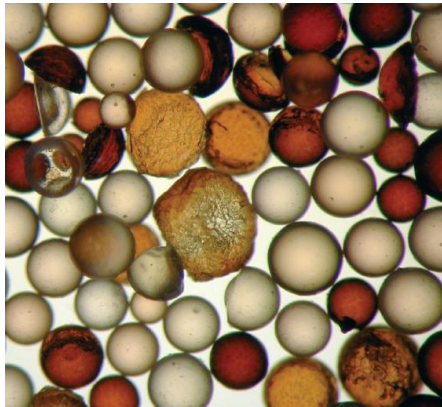


8
diploms

5
disertations

4
patents

Media production sites:



**Ukraine for former
SU countries**



**Germany for EU
countries**

Supplied in 25 and 12 liter bags

About Ecosoft

Founded
in

1991

as a research company
in Kiev, Ukraine

Main office
in Kiev, Ukraine

2009
European office
in Viersen, Germany

177        
employees

3600 sq.m

warehouse and
office facility

Ecosoft group of companies

WQA
AQUATECH
USA



Residential and commercial systems



Drinking water



Industrial projects



Ecosoft group of companies



Since 1999 - Ukrainian OEM

Current industrial projects - 250 with a capacity of 13 000 gpm.



Ecosoft group of companies



**Largest OEM in Ukraine
of residential and commercial
water treatment**



Mobile water treatment plants



Container units



**Automated drinking water
production and vending machines**

Drinking water filters

Full cycle of drinking water filters manufacturing

