



Used water back into the wild?

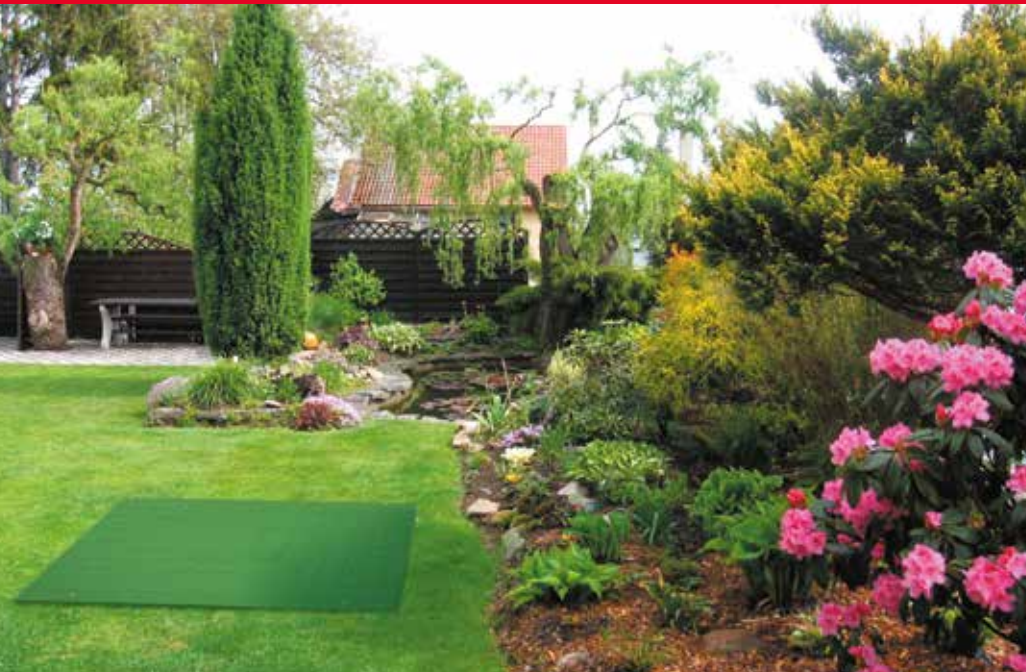
Naturally!

ACO CLARA – Wastewater Treatment Plant



ACO CLARA

Wastewater Treatment Plant



Well-established tradition

We stand for:
Tradition. Decades of experience and practice. Worldwide well-proven quality. First-class and modern wastewater treatment plants. Up-to-date technology. Professional approach and solutions.

We are the synonym of:
Quality wastewater treatment plants. Simple use. Economical yet highly efficient operation and nice design. Ecology.

We esteem:
Our customers, because they are our priority.



ACO CLARA
plastic tank



ACO CLARA
concrete tank

Advantages

One advantage seemed not enough to us.

Therefore, ACO Clara has seven of them.



Easy installation



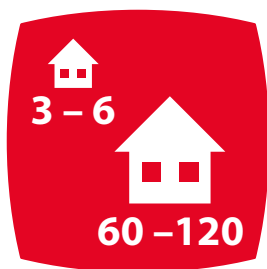
Low operating costs



Easy operation



Odour-proof cover



Maximum flexibility



Arranged service



10 years guarantee!

We guarantee the quality of our work. We are the only company on the market to offer a 10-year guarantee for static properties and water resistance of all our tanks. We trust the materials we use, and we are not ashamed to sign our name to our work.



Easy installation

Forget the trouble, mess and complicated work. It is comfortable, cheap, and simple. All you need is a 230/400 V socket and a suitable site. Whatever size you choose, the conditions will not change.

Underground water, deep installation, or transport cannot take us by surprise. We know what we do.



Low operating costs

Our wastewater treatment plants are made of first-class materials and components. Their durability and reliability guarantee the smoothest possible operation.

Modern technologies ensure low frequency of sludge removal and low energy consumption



Easy operation

The plant works almost by itself. All you have to do is perform occasional checks. ACO wastewater treatment plants are absolutely reliable. They will only need no more than a few minutes of your time.

No repairs, no maintenance.

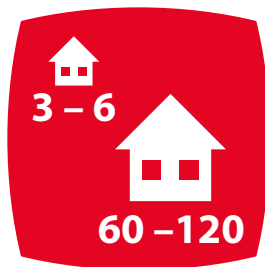
Advantages



Odour-proof cover

Our odour-proof cover will not let anything out. Nobody will even notice your ACO plant. Moreover, the covers are made with much emphasis on design.

We know that the cover is the only part of the plant you can see. Therefore, we have paid special attention to it.



Maximum flexibility

Everybody will choose from the ACO Clara product line. From simple solutions for family houses to large wastewater treatment plants for companies or hotels. ACO Clara will find its place anywhere. In the garden or on a busy road, at petrol stations or on access roads...

There is no place that ACO Clara would not fit in.



Arranged service

We are here for you from the very beginning. We will recommend the suitable type and size of the plant, train the operator and, if you wish, supervise and assist the installation.

Extended service warranty is taken for granted. We put the greatest emphasis on fast and professional action.

Treatment processes

- Mechanical pre-treatment
- Biological treatment by activated sludge
- Sludge separation in final sedimentation tank

Treatment efficiency

A long-term trial run in accordance with the European standard EN 12566-3, performed in an accredited laboratory, has shown the following discharge values:

BOD ₅	6.7 mg/l
COD.....	59.6 mg/l
TSS.....	6.1 mg/l
N-NH ₄	2.0 mg/l



ACO Clara wastewater treatment plants comply with the European standard EN 12566-3, which is proven by a CE certificate.

Functioning

ACO Clara wastewater treatment plants consist of a mechanical pre-treatment part and a bioreactor.

(1) The mechanical pre-treatment part consists of a sedimentation tank with a large-volume of buffer area that equalizes hydraulic irregular loading during the day. This ensures the protection of the biological line against hydraulic peaks.

Wastewater enters the ACO Clara treatment plant through the inlet pipe and flows into the pre-treatment sedimentation tank where particles settle at the bottom of the tank and a scum board traps floating impurities, which protects the mammoth pump from clogging.

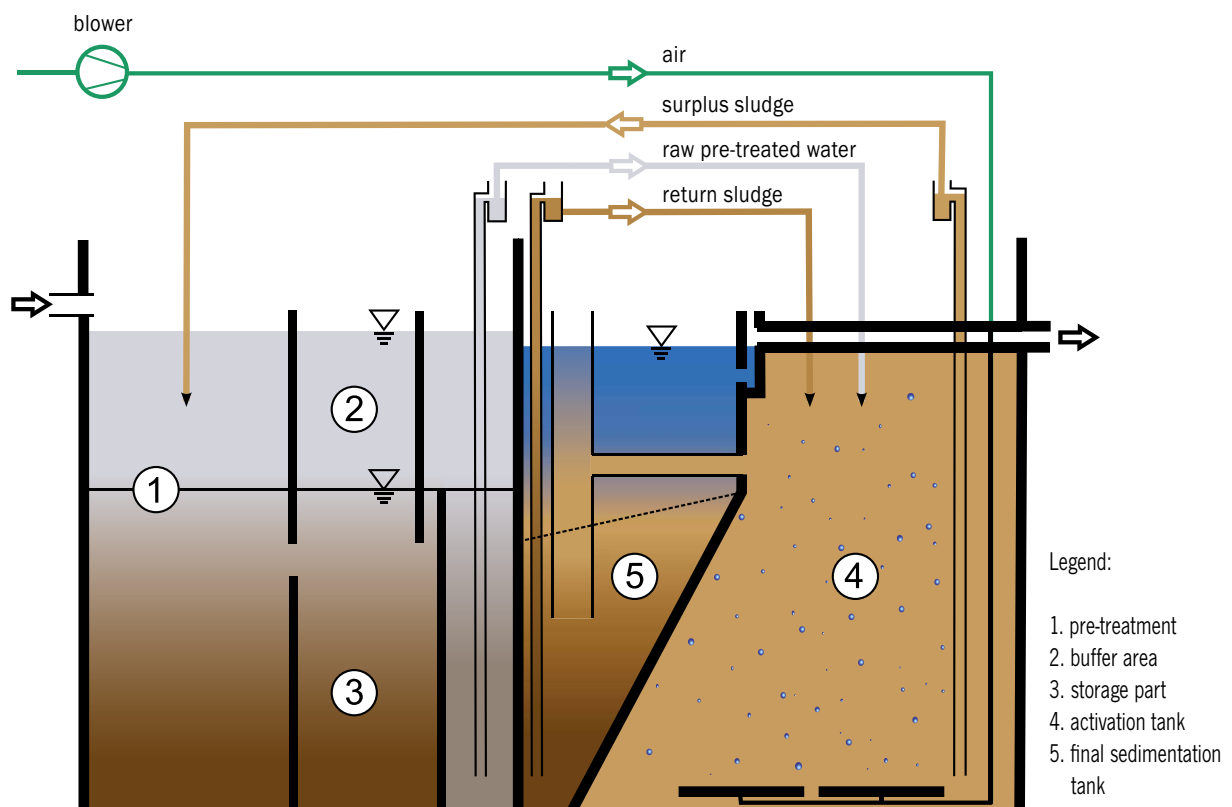
(2) Pre-treated water is constantly, in small amounts, pumped from the buffer area to the biological part of the treatment plant. This ensures even loading, which helps to achieve excellent treatment efficiency.

(3) Surplus sludge is stored in the storage chamber of the pre-treatment tank. Under full load it gets completely filled within 100 – 150 days.

Pumping of pre-treated wastewater, return and surplus sludge, is ensured by mammoth pumps. This type of pumps is almost maintenance-free and clog-free. The flow rate of the pump can be easily controlled, so even very low flow rates can be achieved.

(4) The biological part of ACO Clara treatment plant consists of an activation tank and an embedded final sedimentation tank. The activation tank is aerated by micro-bubble aeration.

(5) Activated sludge from the activation tank flows into the final sedimentation tank where gravitational separation of activated sludge and treated water occurs, and treated water flows over the weir, through the outflow object and into the outlet pipe. Settled sludge is pumped from the bottom of the final sedimentation tank back to the activation tank. The final sedimentation tank can be equipped with a device that ensures automatic skimming of floating sludge in the final sedimentation tank, thus reducing the total volume of maintenance.



Types of treatment plants

Home wastewater treatment plants

ACO Clara home treatment plants are suitable for wastewater disposal from minor sources, such as family houses, small companies, guest houses, etc. They ensure the treatment of wastewater from toilets, bathrooms, kitchens, washing machines, and similar facilities. During the development of our wastewater treatment plants, great emphasis was placed especially on safe operation, easy and cheap installation, and easy maintenance. Thanks to this, ACO Clara wastewater treatment plants rank among the best as regards system reliability and treatment efficiency



Communal wastewater treatment plants

ACO Clara communal treatment plants are designed for all larger sources of wastewater that cannot be connected to public sewerage system. This concerns especially hotels, holiday resorts, medium-size and large companies, residential areas, gas stations, whole villages, etc.

ACO Clara treatment plants can satisfy everybody: demanding, environmentally minded customers, building companies that demand easy and fast installation, or users themselves, who can enjoy trouble-free operation.



ACO CLARA

Thanks to its sturdy tank, ACO CLARA will find its place even where ordinary plastic plants need concrete works. The tank cover will not disturb the appearance of your lawn.

ACO Clara suits lawns.



ACO CLARA Light

Designed for sites without special demands on tank resistance to earth pressure. Similarly to ACO Clara, the ACO Clara Light comes with an attractive cover, too.

Reasonable price.



Field of application

ACO Clara		3 - 6	5 - 10	7 - 14	11 - 22	15 - 29
Nominal size in PE		5	8	12	18	24
Hydraulic load [m³/day]		0.45 - 0.90	0.75 - 1.50	1.05 - 2.10	1.65 - 3.30	2.25 - 4.35
Biological load BOD ₅ [kg/day]		0.18 - 0.36	0.30 - 0.60	0.42 - 0.84	0.66 - 1.32	0.90 - 1.74

ACO Clara	19 - 38	24 - 48	30 - 60	38 - 76	48 - 96	60 - 120
Nominal size in PE	32	40	50	63	80	100
Hydraulic load [m³/day]	2.8 - 5.7	3.6 - 7.2	4.5 - 9.0	5.7 - 11.4	7.2 - 14.4	9.0 - 18.0
Biological load BOD ₅ [kg/day]	1.14 - 2.28	1.44 - 2.88	1.80 - 3.60	2.28 - 4.56	2.88 - 5.76	3.60 - 7.20

ACO CLARA Concrete

The right choice wherever high resistance to earth pressure is required. Robust and solid construction is perfect for access roads, car parks and places with high groundwater level.

Lowest installation costs.



Field of application

ACO Clara		3 - 6	5 - 10	15 - 29	30 - 60	
Nominal size in PE		5	8	24	50	
Hydraulic load [m ³ /day]		0.45 - 0.90	0.75 - 1.50	2.25 - 4.35	4.5 - 9.0	
Biological load BOD ₅ [kg/day]		0.18 - 0.36	0.30 - 0.60	0.90 - 1.74	1.80 - 3.60	

ACO Clara		48 - 96	60 - 120	96 - 192	120 - 240	
Nominal size in PE		80	100	160	200	
Hydraulic load [m ³ /day]		7.2 - 14.4	9.0 - 18.0	14.4 - 28.8	18.0 - 36.0	
Biological load BOD ₅ [kg/day]		2.88 - 5.76	3.60 - 7.20	5.76 - 11.5	7.20 - 14.4	

ACO CLARA Season

ACO Clara Season uses the same technology as the plastic or concrete ACO wastewater treatment plants. It offers additional modifications in case it is necessary to take into account the differences in the load of the plant during the year. This concerns especially the fluctuations between full season and periods outside the season.

This is the case of mountain or sea hotels, campsites, holiday resorts. During the development of ACO Clara Season special attention was paid to simplicity and to operation that does not require special training of the operator.



1. ACO Clara 16-96 S

- Full mode, all tanks in operation
- Load: 48-96 PE



2. ACO Clara 16-96 S

- One part off
- Load: 32-64 PE



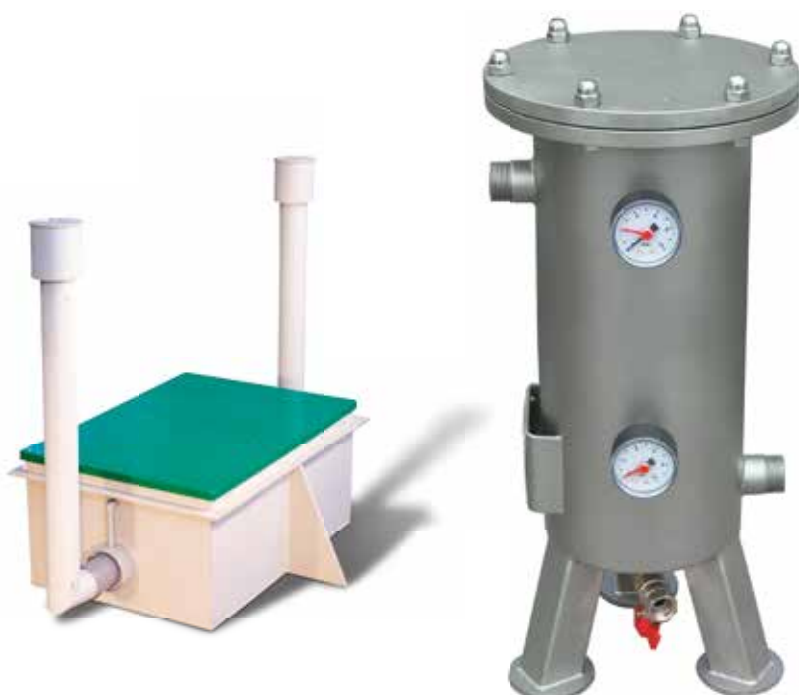
3. ACO Clara 16-96 S

- Only one part in operation
- Load: 16-32 PE

ACO CLARA Automatic

To reduce the volume of work related to operation, the ACO Clara can be equipped with a control unit. This enables automatic drainage of surplus sludge as well as removal of sludge floating on the surface in the final sedimentation tank.

Note: ACO Clara 48-96 Concrete, ACO Clara 60-120 Concrete, ACO Clara 96-192 Concrete, and ACO Clara 120-240 Concrete are equipped with a control unit in basic versions as well.



Box for outdoor installation of the blower

Wherever the blower cannot be installed in a utility room of a building (garage, etc.), we offer robust plastic or concrete boxes for outdoor installation of the blower without any risk of damage, overheating, or theft. Boxes can be designed both for above-ground and underground installation.

Sand filtration – final treatment

For all applications that put special emphasis on the quality of treated water, the technological line can be equipped with fully automatic sand filtration.

START Pack

If the plant cannot be filled with activated sludge upon start-up, we recommend using the START Pack, which contains substances that support fast formation of organic components in the plant, which significantly speeds up the initiation of the treatment process. When added regularly, it helps to keep the biological system of the wastewater treatment plant in excellent condition.

Head Office

ACO Marine s.r.o.

Nadrazní 72
CZ - 150 00 Praha 5
Czech Republic
Tel.: +420 257 217 990
Fax: +420 257 310 718

e-mail: acomarine@acomarine.com
www.acomarine.com

The ACO Group – a strong family you can trust.

All reasonable care has been taken in compiling the information in this document. All recommendations and suggestions on the use of ACO products are made without guarantee since the conditions of use are beyond the control of the Company. It is the customer's responsibility to ensure that each product is fit for its intended purpose and that the actual conditions of use are suitable. This brochure and any advice is provided free of charge and accordingly on terms that no liability (including liability for negligence) will attach to the Company or its servants or agents arising out of or in connection with or in relation to this brochure or any such advice. Any goods supplied by the Company will be supplied solely upon its standard conditions of sale, copies of which are available on request. The Company's policy of continuous product development and improvement renders specifications liable to modification. Information provided in this brochure is therefore subject to change without prior notification.

ACO Marine s.r.o.