EUROWATER

A GROUP OF CO-OPERATING EUROPEAN WATER TREATMENT SPECIALISTS

DECHLORINATION

ACTIVATED CARBON FILTER
SERIES ACM & ACH

- **EFFICIENT DECHLORINATION**
- **CARBON FILLING WITH LARGE CAPACITY**
- **PROGRAMMABLE RINSE PROCEDURES**
- **CORROSION RESISTANT VESSELS**
- **SPECIAL PLANT WITH CIP-SYSTEM**

Type ACM 60 & ACH 1200

ACTIVATED CARBON FILTER

CHLORINATION
Adding chlorine is an efficient method for disinfection of water. Whether free chlorine, chloramine or chlorine dioxide is added, it can be removed in an activated carbon filter, before the water is used for process or drinking water purposes.

ACTIVATED CARBON
Activated carbon is a natural product made of organic coal, wood or coconut shells. A wide pore structure is developed after an activation process with steam or a chemical process, whereby the activated carbon gets an extensive surface area. This area can grow into a size of 2000 square meters or more per gram of activated carbon.

DECHLORINATION
Removal of chlorine is carried out through a catalytic reaction where the compounds of chlorine are transformed into chlorine ions and carbonic acid. The activated carbon has a very large capacity when removing chlorine, because it only takes part in the process as a catalyst.

DECHLORINATION HALF BED VALUE
The ability of activated carbon to remove chlorine is expressed in the dechlorination half bed value. The carbon type applied has a dechlorination half bed value of 2-5 cm. That is, when water to be treated has passed through a carbon layer of 2-5 cm in the filter, the chlorine content is reduced by one-half. This value applies to treatment of neutral utility water.

CAPACITY
The capacity of activated carbon is extremely large because of the extensive surface within the internal structure of the pores. However, all water supplies contain organic matters using the capacity of the carbon through direct adsorption or fouling of the carbon. The life of the carbon filling is thus normally one year.

BACKWASHING
The carbon filters series ACM/ACH are prepared for automatic backwash which helps to keep the carbon as clean as possible. It is important to backwash the carbon with chlorinated water or alternatively with disinfected water, to avoid bacterial growth in the filter.

PREFILTRATION
As mentioned earlier, it is important that the carbon is not fouled, as this reduces the capacity of the carbon. The EUROWATER product program includes a wide range of prefilters, pressure filters with filter bag and sand filters, which meet your needs for prefiltration.

PLANT DESIGN

VALVE SYSTEM
The carbon filters are provided with automatic valves. Series ACM has a EUROWATER valve controlling all the functions during rinse. Series ACH has individual diaphragm valves provided with pilot control.

CORROSION RESISTANT FILTER TANK
The filter tanks are made of steel and are coated with a polyethylene alloy which makes them absolute pore dense. Hereby the strength of the steel and the corrosion resistance of plastics are combined. The pipe systems are made of PVC.

ELECTRONIC PROGRAMMER
The carbon filters series ACM/ACH are provided with an electronic programmer, type ETP 4B, which at predetermined hours controls the plant through the rinse cycles. Both backwash and quality rinse can be individually programmed.

SPECIAL APPLICATIONS
Carbon filtration has various applications within many industries making special requirements to materials, components and operation of the filters. Consequently, EUROWATER can supply activated carbon filters according to special requirements e.g. vessels and pipe systems in stainless steel, activated carbon filters suitable for CIP and different types of activated carbon. However, since these are not included in the EUROWATER standard program, inquiries are considered individually.

SPECIFICATIONS

PLANT TYPE	FLOW RATE m^3/h	PRESSURE LOSS bar	CARBON FILLING litres	FLOOR SPACE mm x mm	HEIGHT mm	INLET AND OUTLET DN/mm	DRAIN DN/mm
ACM 20	0.1-0.3	0.1-0.3	20	300 x 300	1165	20/25	10/16
ACM 40	0.2-0.5	0.2-0.5	35	300 x 300	1465	20/25	10/16
ACM 60	0.3-1.0	0.2-0.5	52	350 x 350	1465	20/25	10/16
ACM 360	0.6-1.4	0.3-0.6	104	400 x 400	1925	20/25	10/16
ACM 600	0.9-2.2	0.4-0.8	156	500 x 500	1925	20/25	10/16
ACH 1200	1.5-4.8	0.4-0.8	260	900 x 700	1925	40/50	25/32
ACH 1800	2.8-7.4	0.4-0.8	468	1050 x 850	1925	40/50	25/32
ACH 2000	2.8-7.4	0.5-0.9	676	1050 x 850	2425	40/50	25/32

The flow rate of the individual plants depends on the chlorine content and the composition of the water.