

# *BIOFILTERS*



# BIOLOGICAL FILTRATION

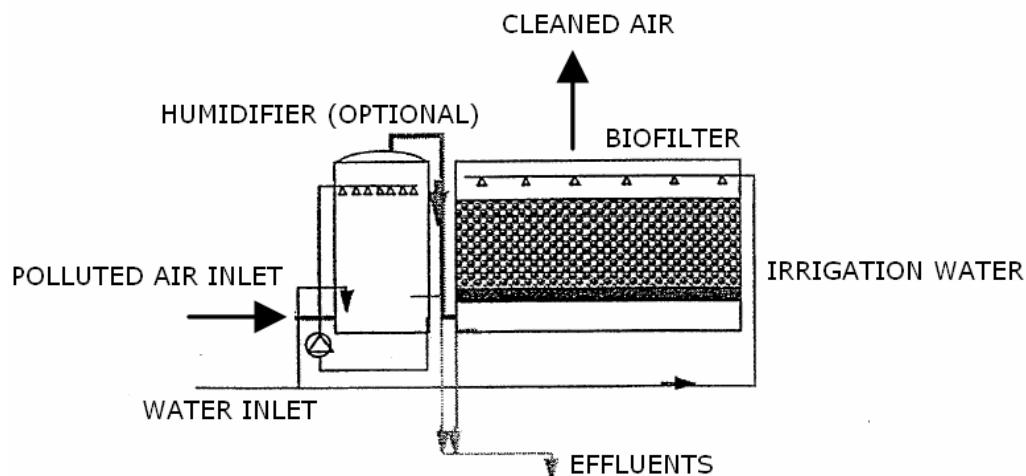
## Process:

Biological abatement systems operate by the dispersion of the contaminated gas through a medium supporting specific micro-organisms which decompose the odorous compounds and use them as a feedstuff. The residence time of the compounds determines how long the micro-organisms have at their disposal to decompose the compounds.

Biofilters are particularly suited to odour removal in sewage treatment works where there are constant contaminant loads. They are also often used in many industries for VOC removal.

EUROPE ENVIRONNEMENT uses an incompressible filter media with a low pressure drop. This allows us to design and fabricate tall filters with a reduced footprint area.

## Process drawing:



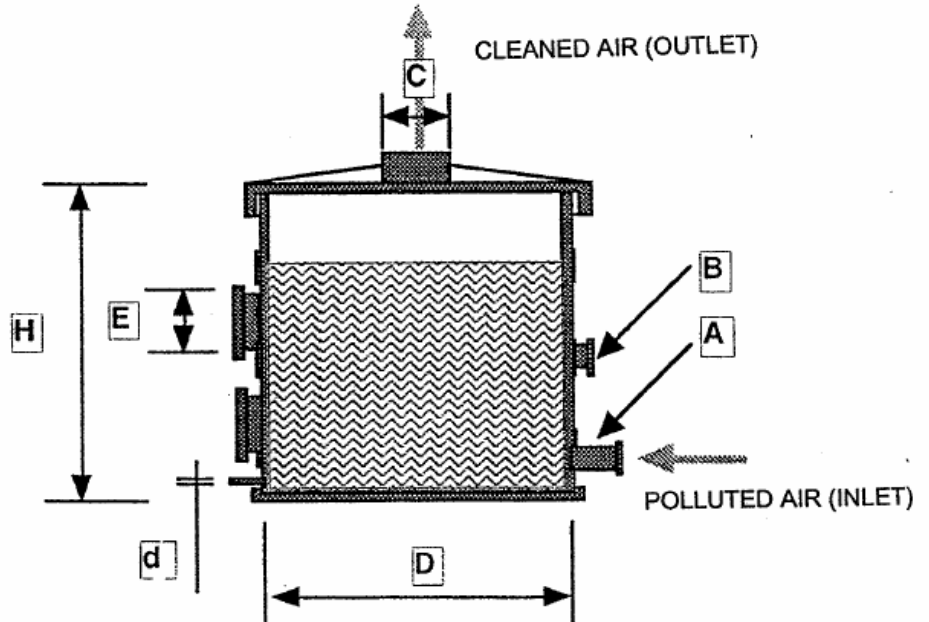
## Main Operating Parameters

Biological filters offer substantial benefits in particular whole life costs are advantageous and low levels of contaminations can be treated without production of effluents or discharges which require further treatment.

It is important to maintain high humidity within the media bed to maximise performance.

# BIOFILTER

## PRESENTATION



## NOMENCLATURE

BIOFILTRE RANGE	FLOW RATE (m³/h)		500	1000	2000	3000	4000
DIMENSIONS	DESIGNATION	#					
A (mm)	D Enter	1	150	200	250	315	350
B (mm)		1	200	200	200	200	200
C (mm)	D EXIT	1	150	200	250	315	350
D (mm)	DIAMETER		1500	2000	3000	3500	4000
H (mm)	HEIGHT		4000	4000	4000	4000	4000
d (mm)	Drain	1	50	80	80	100	100
E (mm)	PORT-HOLES	2	300	300	400	400	500
WATER FLOW RATE (m³/h)			2	3	3	4	5
TIME OF IRRIGATION (h)			1	1	2	2	3
MAX FLO RATE (m³/h)			2	3	3	4	7

## DESCRIPTION

MANUFACTURED IN PP OR HDPE

COLORS: BEIGE (PP), BLACK (HDPE)

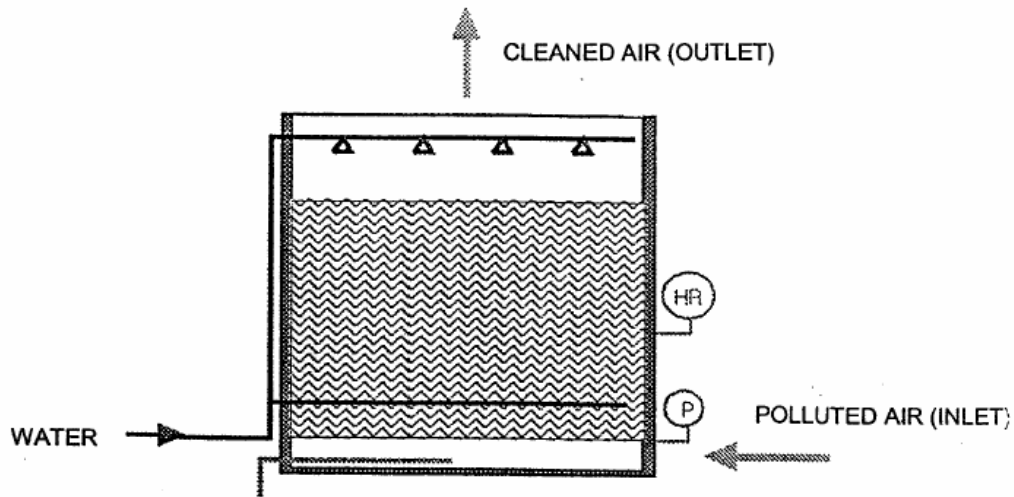
H<sub>2</sub>S < 0.1 – RSH < 0.07 – NH<sub>3</sub> < 0.1 – RNH<sub>2</sub> < 0.1

SYSTEM WARRANTY: 5 YEARS

HDPE IS RECOMMENDED FOR OUTSIDE USE

# BIOFILTER

## FOR WATER SEWAGE TREATMENT WORKS



## DIMENSIONS

FLOW RATE (m <sup>3</sup> /h)	DIAMETER (mm)	SURFACE (m <sup>2</sup> )	HIGHT (m)	$\Delta p$ (mmCE)	EVAPORATION H <sub>2</sub> O (L/h)
500	1500	1.77	4	27	6
1000	2000	3.14	4	37	12
2000	3000	7.07	4	27	24
3000	3500	9.62	4	35	36
4000	4000	12.57	4	37	48

Note: Evaporation is calculated for air at 30°C and 60% RH

## GENERAL OPERATING CONDITIONS

MAXIMUM INLET CONCENTRATION IN mg/m<sup>3</sup>

H<sub>2</sub>S < 10 – RSH < 4 – NH<sub>3</sub> < 10 – RNH<sub>2</sub> < 5

OTHER CONDITIONS :

AIR TEMPERATURE : 7 < T° < 30

AIR HUMIDITY : 70 < HR% < 95

O<sub>2</sub> QUANTITY : 18%MINI

DUST % <95% GRAVIMETRIC

WATERING : POTABLE OR FILTRED INDUTRIAL WATER (1 TO 5 m<sup>3</sup>/h Bar REQUIRED)