TECHNOLOGY
CORRECT USE AND NOT ALLOWED USES

The filter pumps are designed to filter electrolytic solutions used in the following processes:

PROCESS	TYPE OF SOLUTION
nickel plating	acid/alkaline
copper plating	acid/alkaline
zinc plating	acid/alkaline
cadmium plating	alkaline
tin plating	acid/alkaline
gold plating	acid/alkaline
silver plating	alkaline
brass plating	alkaline

The machine is **not designed** to pump or filter liquids other than the ones already listed. For specific applications, it is suggested to contact OMG technical dept.

Regarding electrolytic solutions, the filter pump is absolutely unsuitable for:

chrome-plating treatment baths;
highly-concentrated fluorine baths;
baths containing **organic solvents** such as **chloroform**.

Anyway, the liquid's temperature mustn't be higher than **70° C**.

EMPLOYED MATERIALS

Electrolytic solutions usually consist of a **water base** combined with **acids** (for ex. **Hydrochloric** or **sulphuric** acids), **chlorides** and the **metals** to be deposited for example **nickel**, **silver**, **copper**, **zinc**, **cadmium**, **tin**.

The filter-pump is made of anticorrosive materials to withstand acids and all the dangerous substances usually contained in galvanic baths. This is meant to prolong the working life of the components and to better prevent the risks of accidental contacts.
In particular:

the **pump body** and the **rotor** are made of **polypropylene** (also called **Moplen**), with **silicon carbide mechanical seals**;

in **TE series** the filter tank has an internal coating made of a **protective elastomer** (**ebonite**);

in all models, the mechanical components are made of stainless steel **AISI 316 L** or **AISI 304**;

the supply-included chemical resistant **discharge and suction pipes** have been selected by the manufacturer OMG; the suction ones are also reinforced by a **steel spiral** to avoid flattering due to lack of pressure.

In the CESE and TE series the choice of all the mentioned materials, and particularly the way of construction of the filtering block (inserts/papers sequence), are a guarantee of **high filtering surface** and, therefore, a high filtration degree (filtration **< 1 micron**).

In particular, according to the different pump models, the filtering surface is between **0,2 mq** and **20 mq**

TECHNICAL DATA LIST

The following lists contain the main technical data concerning the series, in order to choose the best model according to the bath to be filtered.

Model series CESE	CESE 2	CESE 3	CESE 5
Model series CESE M	CESE 2M	CESE 3 M	CESE 5 M
Capacity (l/h)	2000	3000	5000
Working pressure (bar)	1.6 1.8	1.6 1.8	1.6 1.8
Motor electric power (kW)	0,36	0,55	0,70
Voltage (V)	380/220	380/220	380/220
Frequency (Hz)	50	50	50
Protection degree	IP 55	IP 55	IP 55
Suction pipe length (m)	4	4	4
Discharge pipe length (m)	4	4	4
ID suction/ discharge pipes (mm)	20 20	25 25	30 30
ID papers (mm)	110	205	256
Filter papers hole (mm)	17	35	50
n. of papers E2	27	27	27
n. of filtering inserts	26	26	25
Filtering surface (m2)	0.2	0.8	1.22
Filtering degree	< 1 µm	< 1 µm	< 1 µm
Total weight ca. (kg)	25	42	65

Models series TE	TE 5	TE 10	TE 15	TE 25	TE 30
Capacity l/h	5000	10000	15000	25000	30000/35000
Max working pressure (bar)	1.8 / 2.2	1.8 /2.2	1.8 / 2.2	1.8 / 2.2	1.8 / 2.2
Motor electric power (kW)	0,70	1,50	2,20	4,00	5,5
Voltage (V)	380/220	380/220	380/220	380/220	380/220
Frequency (Hz)	50	50	50	50	50
Protection degree	IP 55	IP 55	IP 55	IP 55	IP 55
Suction pipe length (m)	4	4	4	4	4
Discharge pipe length (m)	4	4	4	4	4

Pipe for carbon length (m)	2	2	2	2	2
ID suction pipes	25	30	40	60	60
ID discharge pipes	25	30	40	40 (X 2)	40 (X 2)
ID suction carbon pipes	20	25	25	25	40
ID discharge carbon pipes	20	25	25	25	25 (X 2)
Filtering papers dimensions (mm)	310X310	310X310	305X538	305X538	305X538
n. of papers holes (cm)	1 hole	1 hole	2 holes	2 holes	2 holes
n. of papers	40	66	50	84	168
n. of frames	20	33	5	42	84
n. of panels	19	32	24	41	82
Filtration degree	< 1 μm	< 1 μm	< 1 μm	< 1 μm	< 1 μm
Filtering surface	2,7	4,5	6,5	10	20
Total weight ca. (kg)	170	240	340	470	1200

MODEL	POWDERED CARBON
CESE 2 – 2M	0,3 – 0,5
CESE 3 – 3M	0,8 – 1
CESE 5 – 5M	1 – 1,5
TE 5	2 – 2,5
TE 10	2,5 – 3
TE 15	3,5 – 4
TE 25	5-6
TE 30	10