

1. General

Plant construction in general and water treatment in particular often need to add dry substances such as polyelectrolytes, flocculants or activated carbons to water in fine suspension or solution. Poorly-soluble substances can cause difficulties upon input. This results in the formation of lumps or layers on the water surface. The resulting minimum output of the process is impermissible.

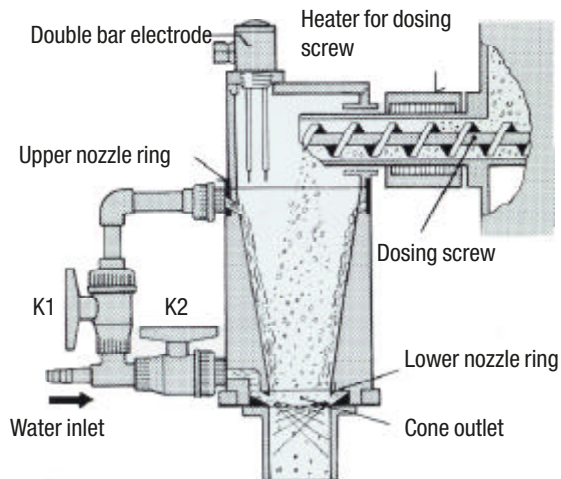
Suspensomats can be used as a simple method to pre-dissolve or wetten the dry substances using the added water (required anyway) to ensure homogeneous dispersion. We recommend installing an agitator in the preparation chamber.

Easily-soluble dry substances such as calcium hydroxide or aluminium sulphate require a simple downpipe without water flushing as dust protection.

2. Function

The suspensomat is a cone equipped with a number of tangentially-aligned injection nozzles; these generate a fast-rotating water film on the entire surface of the cone. The metered dry feed only falls on rotating water. The acceleration of the revolutions increase considerably at the cone outlet, thereby producing an intensive wetting effect. A jet-formed nozzle ring on the lower outlet of the cone sprays the complete cone outlet face with water in a concentric fashion. The ratio of the water on the upper to the lower nozzle ring can be set on the ball valves K1 and K2.

The water supply of the suspensomat is made in the bypass to the water which is required to fill the preparation tank. The total water volume is provided by a dilution water station with a flow meter.



3. Technical data

Suspensomat A

- Max. water volume for both nozzle rings together: 1000 l/h
- Dry substance output volume 500 l/h
(corresponds to 325 kg/h polyelectrolyte, 150 kg/h activated carbon)

Suspensomat B

- Max. water volume for both nozzle rings together: 2500 l/h
- Dry substance output volume 3000 l/h
(corresponds to 2000 kg/h polyelectrolyte, 900 kg/h activated carbon)

Downpipe

- Max. output volume of dry substance 3000 l/h
(corresponds to 1500 kg/h calcium hydroxide)

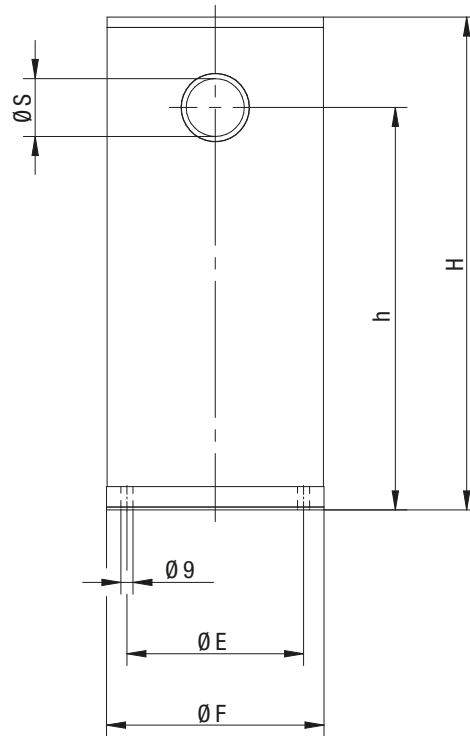
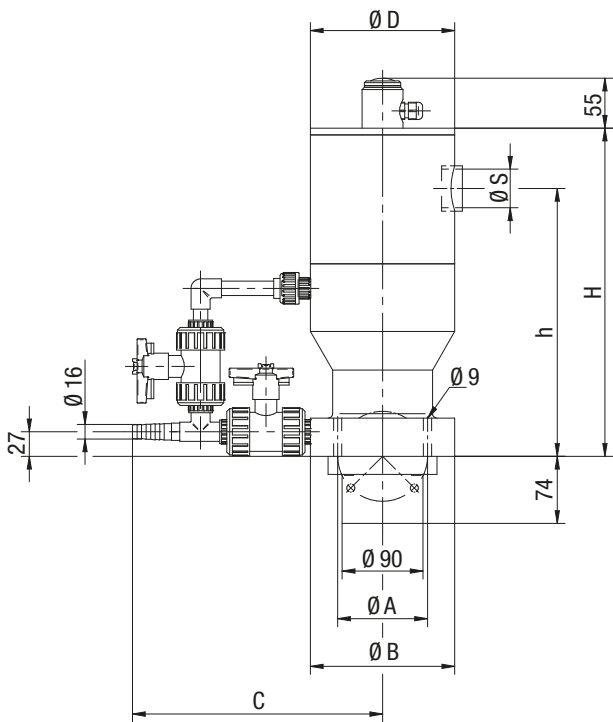
4. Accessories

- A level double bar electrode is included in the scope of delivery to ensure that the water for dissolution of the dry feed does not rise above the funnel when the large lumps of dry feed block the funnel and then flows into the dosing screw of the dry good metering unit. This blocks off the water inflow on the solenoid valve via a level relay and switches off the dry material feeder.
- As activated carbon exhibits different suspension characteristics, we recommend using a second wetting unit for the suspension of activated carbon. Upon request, a water jet injector can be fitted directly under the suspensomat which directs a very strong jet to the activated carbon. An injector can be required if the mix needs to be transported against a higher system pressure.

5. Dimensions

Suspensomat type A and B

Downpipe



Dry material feeder type TEH		Ø S	Ø A	Ø B	C	Ø D	h	H	E	F
0004, 0014	A	43	140	160	270	160	295	362	130	160
0038, 0060, 0150		64	140	160	270	160	295	362	130	160
0320, 0420		77	140	160	270	160	295	362	130	160
0850, 1380	B	94	230	250	440	250	415	507	230	260
1900, 2650		120	230	250	440	250	415	507	230	260

All dimensions in millimetres (mm).