

1. Dissolving system HYPODOS for use of Calcium hypochlorite

Calcium hypochlorite is an excellent chemical to disinfect swimming pool or drinking water:

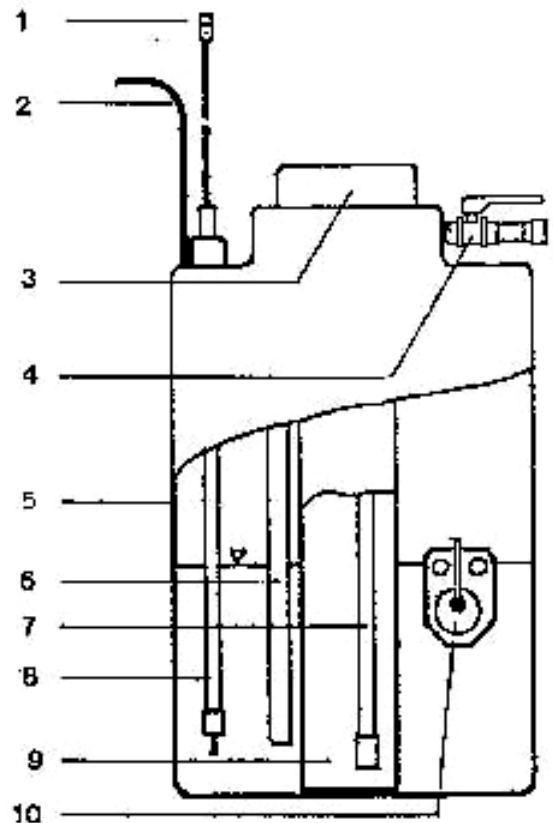
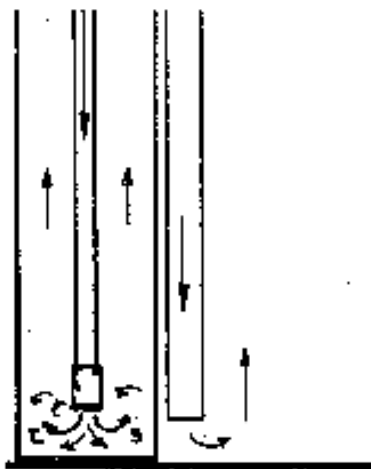
- Best disinfection power – 70% free chlorine
- Long time stability – best storage properties
- Physiologically impeccable

Its disadvantage is the poor dissolvability cause of the content of undissolvable calcium carbonate and calcium hydroxide which makes the exact metering of an untreated solution difficult. The HYPODOS dissolving system solves this problem.

The HYPODOS dissolving system is used for small pools or drinking water plants up to a chlorine dosing need of app. 100 g/h which would be sufficient for indoor pools up to 400 m³ or for outdoor pools up to 100 m³ in volume using concentrations of 2-6%. The dosing performance should not exceed 2 l/h as otherwise the swimming filter could be blocked too fast.

Attention! Never mix the dry chlorine or chlorine solution with acid or other chemicals. Do not use other chlorine than calcium hypochlorite. Do not mix calcium hypochlorite with other dry chlorine qualities

- 1 empty switch connector
- 2 suction tube from swimming filter
- 3 cover for dissolve tube
- 4 dissolving water supply valve
- 5 tank poly ethylene
- 6 solution overflow tube
- 7 dissolving water nozzle tube
- 8 empty switch
- 9 Turbo-Dissolver tube
- 10 Swimming filter



The dissolving water coming from any pressure system > 0,5 bar (from filter or drinking water supply tubing) is conveyed to the bottom of the Turbo-Dissolver to a

nozzle making high turbulence to the chemical filled in at the top of the dissolver tube. The chemical is dissolved as completely as possible without other handling or stirrer. The undissolvable fine particles make a turbid solution. A filter swimming on the surface of the solution where the concentration of the particles is lowest separates these particles to supply the metering pump with a clear solution. So blocking of the pump and the dosing tube is avoided.

The empty switch in the tank switches off dosing, before the swimming filter comes down to the remaining slurry.

2. **Mounting / Placement of the HYPODOS dissolving equipment**

At placement of the equipment must be considered that the dry chemical and the chlorine solution are hazardous to people and environment and the governmental regulations for handling and storage of these chemicals have to be followed.

Generally should be:

- **The room should be as cool as possible: e.g. hut in the shadow**
- **The room must be vented and have a drain**
- **The chemical solution container should stand in a protection tub**
- **while handling the chemicals use the relevant protective clothing, e.g. goggles, gloves and apron**

The tank should be placed on a socket app 25 cm high so that the remaining sludge from the calcium hypochlorite can flow out to a small container easily for cleaning.

3. **Connecting the supply water tube and drain ball valve**

Mount the system near the supply water tapping point to have short connection to the system. The connection can be of solid tubing or made by a hose at least 1/2". For the drain valve there is 1 thread 3/4" at backside of the tank. You screw the ball valve into the thread.

4. **Filling of the dissolving system**

Refilling should be at a level of app. 1/3 of the tank volume that dosing is not interrupted by the level switch at app. 1/4 to avoid that the swimming filter sinks to the sludge at bottom of the tank. For the time of filling please switch off the dosing of chlorine as at making a new solution there is a high concentration of fine particles in the solution which could block the filter quickly. The particles will sink down in about halve an hour so after this time the solution is nearly clear at the top section and dosing can be started again without big load of the swimming filter.

The concentration of the solution should be made always same, so the dosing pump can run always with the same performance. To know how much chemical is to be filled use the table below.

The filling level of the tank can be seen at the front of the tank by the marks.

Calcium hypochlorite in kgs to be filled as function of the actual filling level of the tank and the wanted concentration: here chemical concentration.

HYPODOS 200	2%	4%	6%	8%
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filling level

150 l	1	2	3	4 kg
125 l	1,5	3	4,5	6 kg
100 l	2	4	6	8 kg
50 l	3	6	9	12 kg
empty	4	8	12	16 kg

HYPODOS 300	2%	4%	6%	8%
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filling level

200 l	2	4	6	8 kg
150 l	3	6	9	12 kg
100 l	4	8	12	16 kg
50 l	5	10	15	20 kg
empty	6	12	18	24 kg

Chlorine concentration = chemical concentration x 0,7

At first filling the swimming filter should be taken out of the tank, the suction tube disconnected from the pump.

Open the valve at the isolation valve at the tapping point. Then open slowly the ball valve (4) at the inlet to the dissolving tube (9) so that the overflow (d25) to the tank is about $\frac{3}{4}$ full.

Attention!! Before filling the chemical into the dissolving tube the dissolving water must flow over to the tank!!!!

Then fill in the chemical as calculated by the table **slowly**:

all $\frac{1}{2}$ minute app. 1 kg which is 1 litre.

At filling in the chemical, cover the opening of the dissolving tube (by hand) as far as possible to prevent the spreading of chlorine dust.

Attention!! Do not interrupt the filling procedure, never leave the equipment before end of the dissolving operation

At beginning of the dissolving procedure a very turbid solution flows over to the tank, but **at the end only clear water should flow over.**

If the tank is full, close the ball valves at the dissolver and at the tapping point.

Attention! Never mix the dry chlorine or chlorine solution with acid or other chemicals. Do not use other chlorine than calcium hypochlorite. Do not mix calcium hypochlorite with other dry chlorine qualities

5. Setting the swimming filter into the tank

When the tank is full it should be waited for app an hour that the top section (15 cm) has cleared. Then you push the filter slowly into the solution that it can be filled with solution from outside. The suction tube connection is to be hold to top. The end of the suction tube at the dosing pump should be open. When the filter is completely down in the solution and filled with solution let it swim. Connect the other end of the suction tube at the pump suction side.



The connector piece at the top wall of the tank (option for diaphragm pumps) is a non return ball valve which supports suction / pump function. If fitted, check before pushing in the filter whether the ball is not blocked.

6. Cleaning of the filter

If the filter is no longer swimming as shown in the sketch above this is a sign that the filter cloth is blocked.

- Take out the filter carefully from the tank by pulling at the suction tube.
- Let the chlorine solution flow out of the filter.
- Transfer it to a bucket with water
- Wash outside by means of a brush
- Flush it sometimes in clean water
- If needed, add some hydrochloric acid the last fresh washing water to solve the resisting calcium particles
- Wash again with fresh water and put the filter again into the tank.