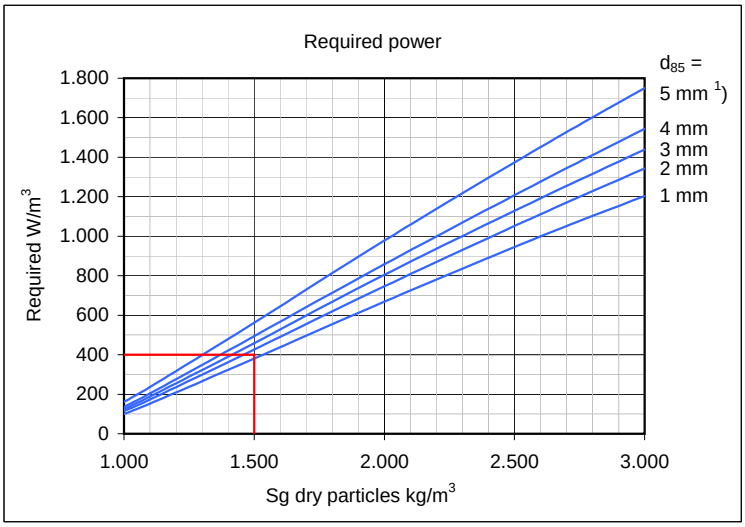
ITT Water & POMPDIRECT

RoboWhirl selection charts

Sizing of the RoboWhirl is easy and requires 3 steps:



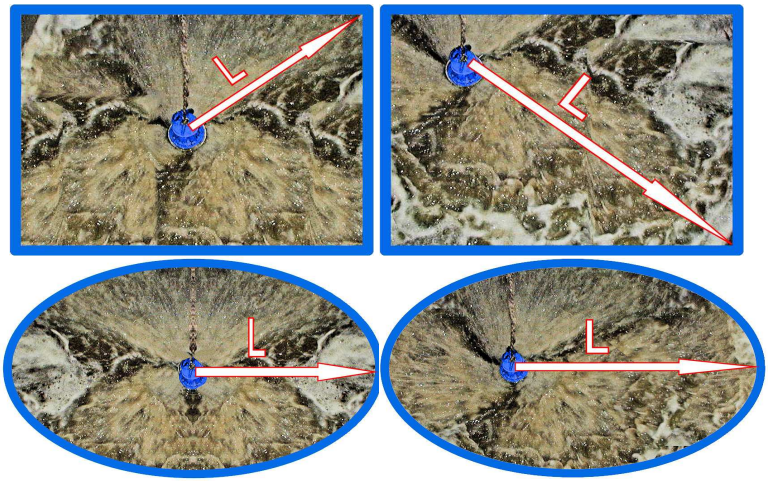
Step 1:
How much power is needed to keep the particles in suspension or to bring particles in suspension again

The size, shape and nature of particles do have an effect on the required energy to prevent parts to settle or to bring settled parts in suspension again.

The graph on the left applies to grain sized particles that will not stick together and for “clean cold water” as carrying liquid.

With the specific weight of the dry particles and the particle size d85 the required input power P1 in W/m^3 can be found.

1) d_{85} is the is the maximum size for 85% of the parts. 15% may be bigger.



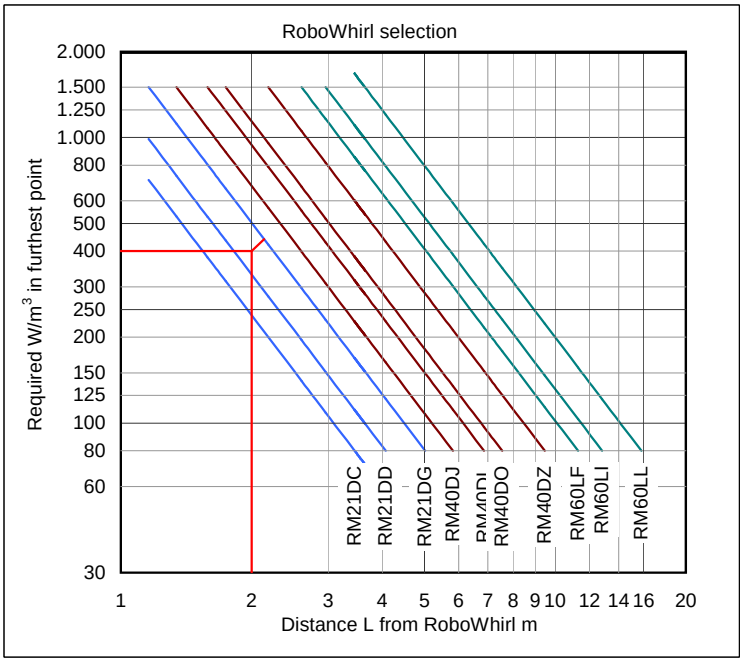
Step 2:
What is the best location for the RoboWhirl and how far is the furthest point

With the RoboWhirl placed in the middle of circular or rectangular sumps, there is a risk for dead corners near walls. Particles might settle there.

With the RoboWhirl placed off centre, there will be more flow along the walls reducing the risk for settlements.

It is recommended to maintain a minimum clearance of 1 m to the walls.

Dimension L is input for step 3.



Step 3:
Select the proper size RoboWhirl

With the required power from step 1 and the maximum distance L from step 2 the required RoboWhirl can be selected from the graph on the left.

The power levels apply to the lower part of the sump only, with a maximum height equivalent to 3 times the distance from impeller to floor, irrespective of the actual water depth. At higher levels the actual power greatly depends on sump geometry etc.

The tables are corrected for electrical input, not output. All motors of the RoboWhirl do provide spare power to cope with the higher specific weight of the particles / water mixture.