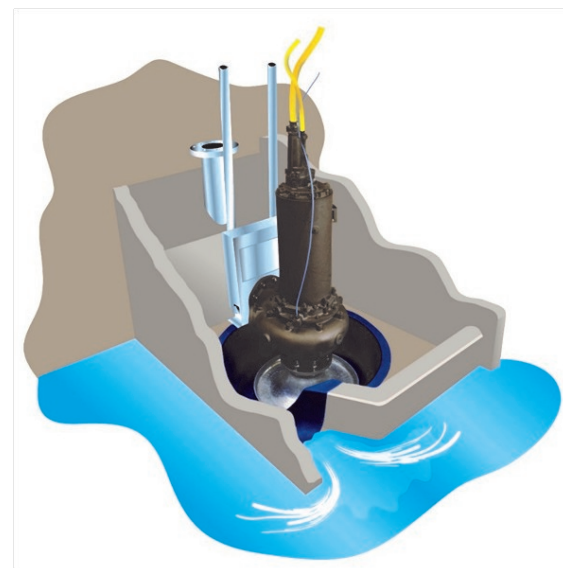
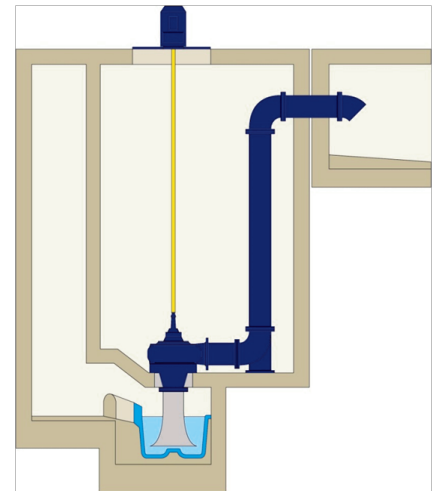
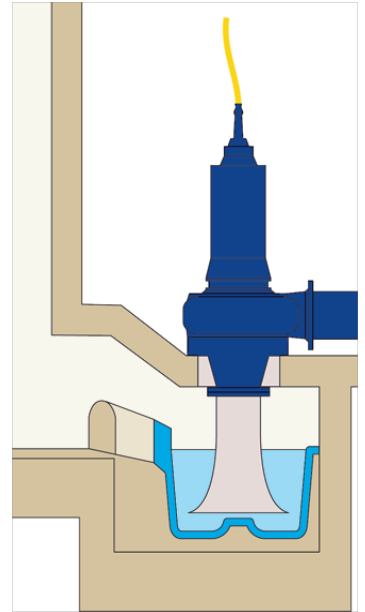


Prerostal Systems

*For the removal of all Floating,
Suspended and Settled Solids*

PolyPump Ltd

Providing your pumping solutions
sales@polypump.co.uk
01296 488 294



Applications that benefit from Prerostal

- SEWAGE & STORM STATIONS
- OILY WATER
- HIGH FAT, OIL & GREASE CONTENT
- WASH DOWN SUMPS
- SUMPS WITH FLOATING MATERIAL
- LIMITED VOLUME STORAGE AVAILABLE
- SHALLOW CONSTRUCTION SITES
- ALTERNATIVE TO ARCHIMEDES SCREW

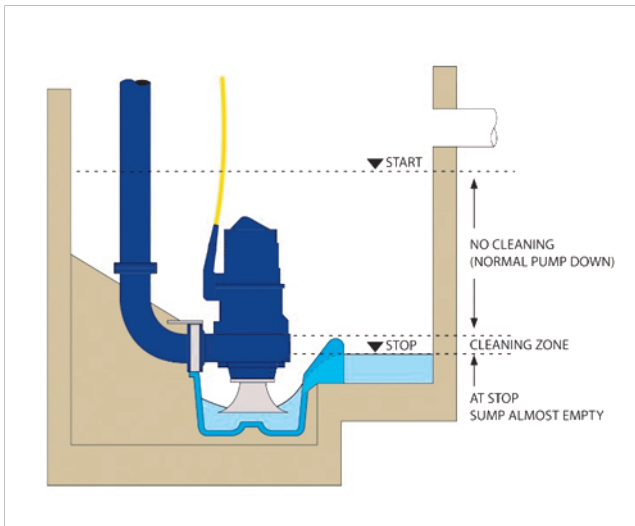
What is Prerostal?



Prerostal is a unique system developed by Hidrostal in 1970 to provide the pump user with a highly effective sump cleaning system using just the Hidrostal pump, gravity and some clever but simple civil engineering, to incorporate a prefabricated swirl basin.

In addition to this the system naturally offers a flow turndown at lower levels during the maximum cleaning cycle. Flow turndown can be up to 50%. Flow matching between inflow and outflow is also possible, once the station liquor level enters the cleaning zone cycle.

Prerostal has proven to be a globally sustainable product with many installations going strong some 20 to 40 years after installation.



The Prerostal swirl basin is a design that is constructed with a partial weir in front of a prefabricated Prerotation basin. This directs the flow in to the basin's integral entrance channel. This tangential entrance channel causes the flow entering the basin to rotate in the same direction as the pump.

The rotational speed of the prerotating flow in the basin varies according to the sump level, reaching a maximum at lowest level. The pump flow will vary in relation to the rotational speed of the liquid in the basin. At high level with low to no rotational speed, the pump operates according to its maximum performance curve. At low level and high liquid rotational speeds the pump operates to a reduced performance curve.

With proper design of weir height, entrance channel width, basin and bellmouth geometry; automatic matching of discharge flow rate to inflow can be achieved with fixed speed pumps.

Prerostal was developed to reduce operational costs (OPEX) in both large and small stations.

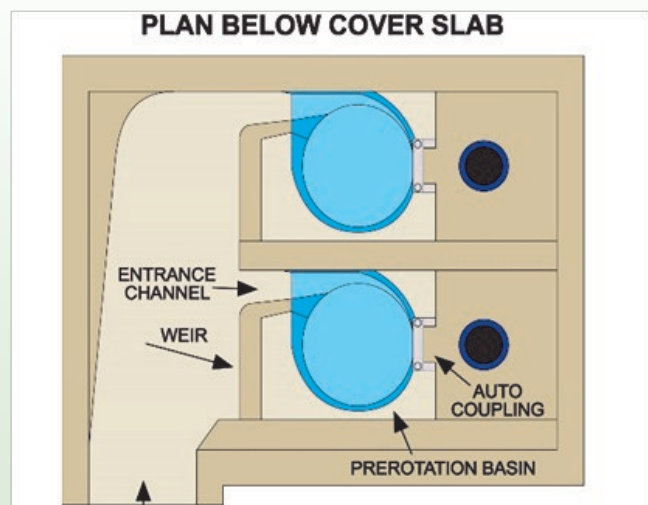
User Benefits:

Highest Reliability—Clog free performance that is reliable and simple. A proven low Opex solution.

Self Cleaning—Cleans wet wells by automatically removing floating, suspended and settled materials each time the pump goes through its operating cycle. This also reduces odours.

Simple System—Uses gravity to control output flows and self cleaning.

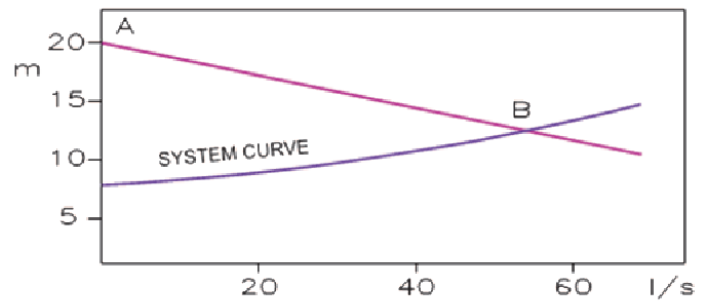
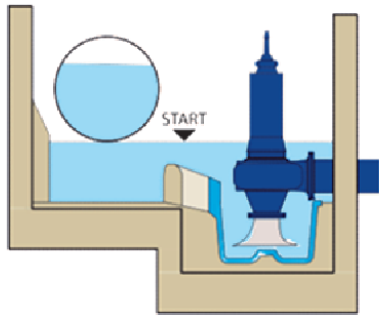
Standard pumps, controls and instrumentation are utilised. Nothing complex for end users to maintain and operate.



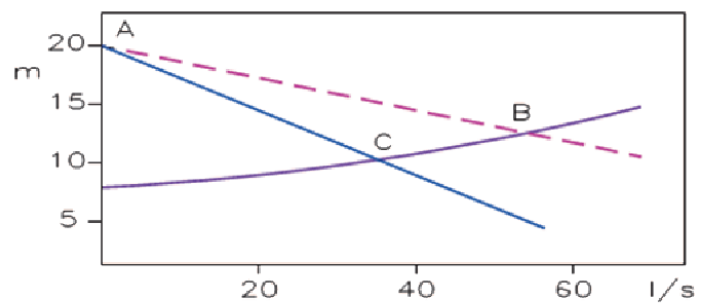
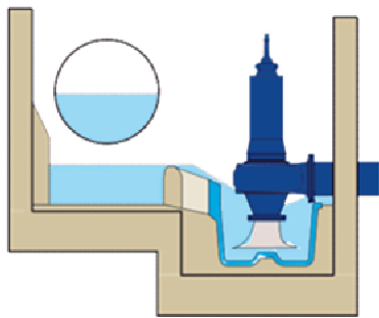
How Flow Matching Works



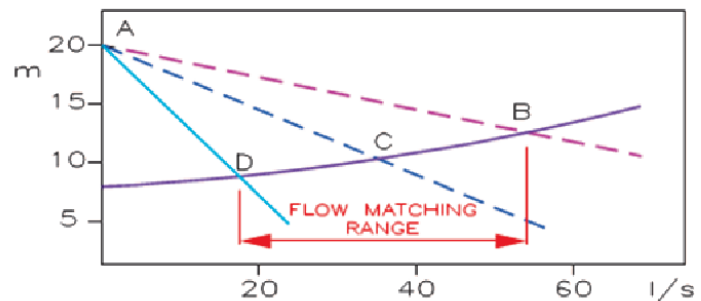
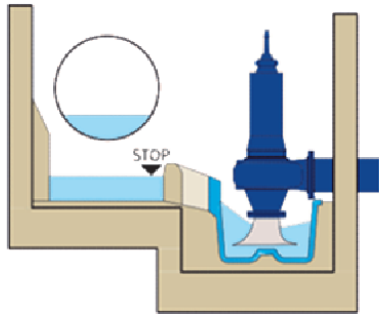
1) At this level inflow matches standard pump curve AB



2) Inflow rate less than pump capacity. Small amount of prerotation in basin gives new curve A-C so pump output matches inflow.



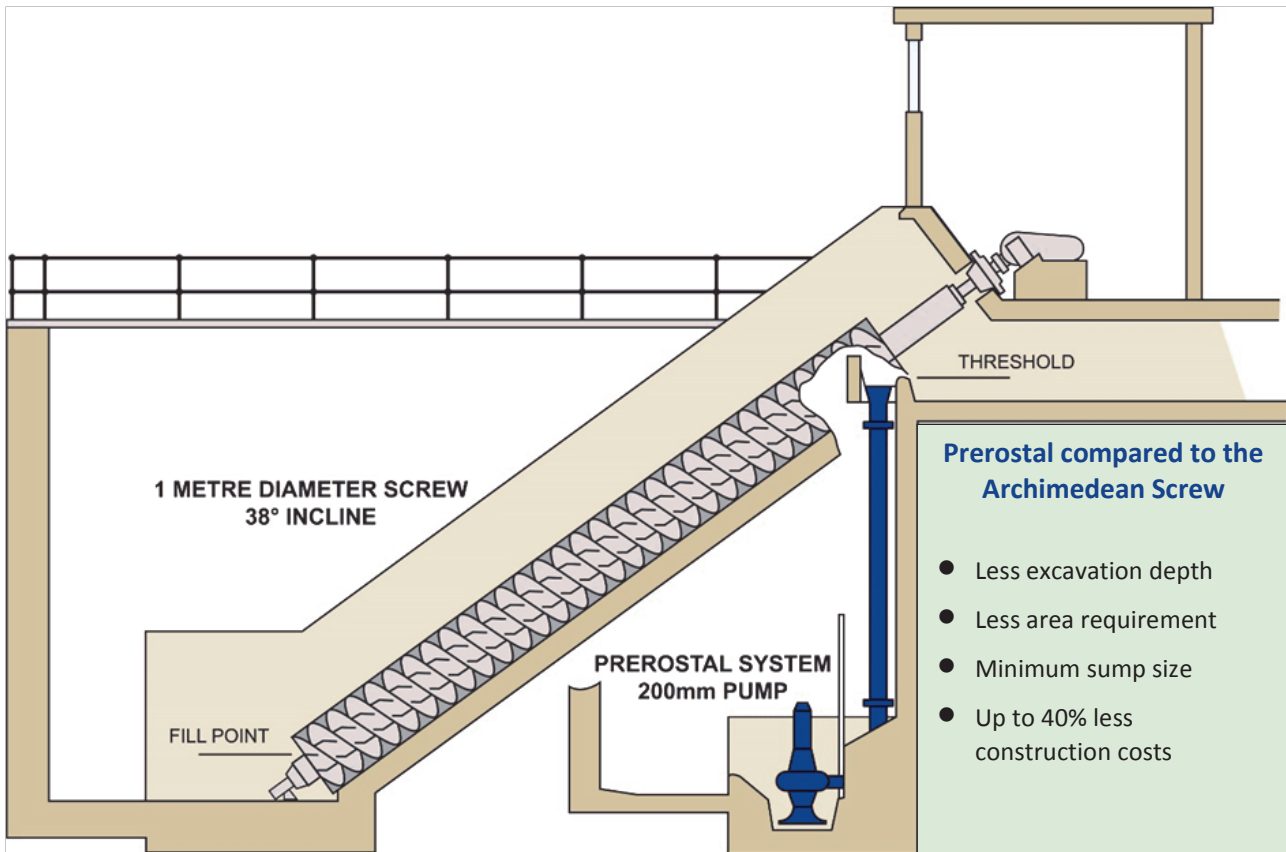
3) Inflow continues to fall. High degree of prerotation to give curve A-D so pump matches inflow.



The principles are the same for both wet and dry pit versions.



An Alternative to Archimedes Screw Pumps



Hidrostal can offer a range of pumps from 80mm to 700mm branch size for Prerotation systems.

With multiple pumps flow rates between 10 l/sec to 6,000 l/sec can be achieved.

Pumped head range is generally between 2 m – 22m head for a Prerotation system. This is well in excess of the upper limits of Archimedes screw pumps.

