

# ACTIFLO® PACK (MINI series)

## The Ultimate Microsand Enhanced Clarifier

The pre-engineered Actiflo® Pack (MINI series) is a very compact standard package plant for drinking water treatment, municipal wastewater treatment as well as industrial process water and wastewater treatment and reuse. The process is a highly efficient and proven clarification technology based on a strong 20+ year operating experience and over 750 references worldwide (2012). In Actiflo® Pack (MINI series), water is flocculated with microsand and polymer. The microsand enhances the formation of robust flocs and acts as ballast, significantly increasing their settling velocity. The unique characteristics of the resulting microsand ballasted flocs allow for clarifier designs with very short retention times, high rise rates and extremely compact system footprints that are up to 50 times smaller than other clarification processes of similar capacity. A hydrocyclone ensures the microsand continuous cleaning, recovery and reuse in the process.

- **Unit flow rates:**
  - Drinking and process water: from 3 to 7 m<sup>3</sup>/hr
  - Wastewater: from 3 to 15 m<sup>3</sup>/hr



### FEATURES & BENEFITS

- High treatment efficiency: Turbidity and TSS removal up to > 99%; treats all water and wastewater sources
- Extremely quick start-up time: Reaches treatment efficiency within few minutes
- Process stability: The microsand buffers the effect of raw water flow or load variations, making the process very user friendly and easy to operate
- Quick optimisation: Short hydraulic retention time makes it feasible for the process to adjust quickly to changing raw water quality
- Efficient use of chemicals: Microsand ballasted flocculation and settling helps to avoid common chemical overdosing to achieve good clarification performance
- Efficient in cold water applications: Suitable for use also in Nordic regions
- Compact design: Can be easily integrated and retrofitted into existing structures
- Modular: Units may be combined to achieve treatment of high flow rates



### APPLICATIONS

- Surface and ground water treatment
- Very high or very low turbidity water and wastewater
- Treatment of water with high natural organic matter (colour, TOC)
- Efficient treatment of algae, phosphorus, heavy metals, oil & grease, particle counts, crypto and giardia, coliforms, etc.
- Primary, secondary and tertiary clarification of wastewater
- Treatment of biofilter backwash water and trickling filter effluents
- Stormwater and combined sewer overflow treatment, reverting to effluent polishing during dry weather
- Industrial process water treatment for cooling tower make-up or prior to demin plants
- Pre-treatment to membrane and ion exchange systems
- Industrial wastewater treatment in all market segments, including leachate and run-off water
- Recycling/Reuse of municipal and industrial effluents

### HYDREX® CHEMICALS

Hydrex™ 3000 & 6000 water treatment chemicals from Veolia Water Technologies should be used for optimized plant operation.

### RELATED SERVICES

Local after-sales service and support teams offer preventative and corrective maintenance programs to ensure the long-term, efficient operation of installed plant.





Process & Drinking Water Application	3(*) - 7 m <sup>3</sup> /H
Industrial & Municipal Wastewater Application	3(*) - 15 m <sup>3</sup> /H
Length	3 m
Width	1 m
Height	2.7 m
Operating Weight	3.4 tons
Total Installed Power	max. 4kW
Supply Power (Standard) (**)	380V x 3phase x 50/60 Hz
Recirculation Flowrate	0,4-1m <sup>3</sup> /h
Chemical Dosing Pump (Standard) (***)	PAC, Acid, Alkali, Polymer
Monitoring Instrument (Standard) (****)	1 x pH at Coagulation Tank 3 x Flowmeter at Inlet, Recirculation & Sludge Line 1 x Pressure at Hydrocyclone Inlet 2 x Turbidity Meter at Inlet & Outlet

(\*) In case of the operation at < 5 m<sup>3</sup>/H, the separation of sludge from microsand should be investigated, due to over-mixing in Maturation Tank.

(\*\*) 220V x 3 phase x 50/60Hz is optional.

(\*\*\*) Additional chemical dosing or different type of chemical should be discussed prior to the order.

(\*\*\*\*) Additional monitoring should be discussed prior to the order.

Actiflo® PACK (MINI series) is supplied as a complete functional system, including chemical preparation and dosing equipment as well as integrated PLC & SCADA.

It can be supplied as a stand-alone unit or pre-installed in a 20' container.

