

WATER AND WASTEWATER TREATMENT



Actiflo[®] ACP Package Plants

The World's most advanced packaged clarifier designed to fit a wide range of applications: drinking water, industrial process water, primary and tertiary wastewater treatment



JOHN MEUNIER

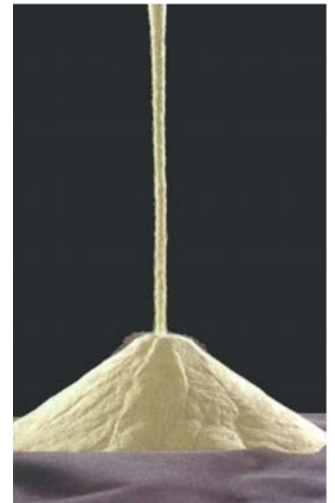
The result of years of research and development, the Actiflo® ballasted clarification process, developed by OTV, can solve the most severe treatment problems and meet the most stringent economic limitations. The Actiflo® process represents the most advanced available clarification process on the market today.

The Actiflo® ACP package plants are engineered to provide a compact modular system in response to the ever growing demand for high performance water treatment process in an affordable and practical format. The ACP package plants are particularly compact and thus ideal for sites with important space limitations. They are designed to offer easy access to all its components, allowing efficient maintenance and inspection routines.

KEY FEATURES

The **Actiflo® ACP** units represent a breakthrough in water treatment technologies. It combines the following elements:

- **Microsand** serves as seed for floc formation and ballast to increase floc density and high settling velocity.
- **Plate settling** greatly reduces the clarifier surface.
- **Package Plant** configuration for manufactured compact and affordable installation.



CHARACTERISTICS

- **High efficiency**

The **Actiflo®** package plants are designed to treat a wide variety of raw water. By reducing turbidity, color, suspended solids, metals, TOC, taste and odor more efficiently than any other process in the market, the ACP insures water production of the highest quality. Even though the ACP units are extremely compact, they nevertheless offer performances comparable to systems built on a much larger scale.

- **Savings**

The extremely high efficiency of the **Actiflo®** ballasted floc settling process allows settling rates ranging from 40 to 200 m/h (16 to 80 gpm/sf), leaving conventional systems settling performance far behind. Since the units are standard, extremely compact and competitively priced, civil engineering costs are, as a result, greatly reduced.

- **Process stability**

The ACP produced water quality remains stable even under major raw water fluctuations in flow-rate, turbidity or temperature.

- **Very short start-up time**

Actiflo® ACP will reach a steady state operation very quickly (usually less than 20 minutes).

The process retention time is very short, leading to a very quick response to changes in raw water quality. Chemical dosages are therefore minimized. Operating the ACP units in start / stop mode becomes a major advantage, considering energy consumption efficiency.

- **Reduced operating costs**

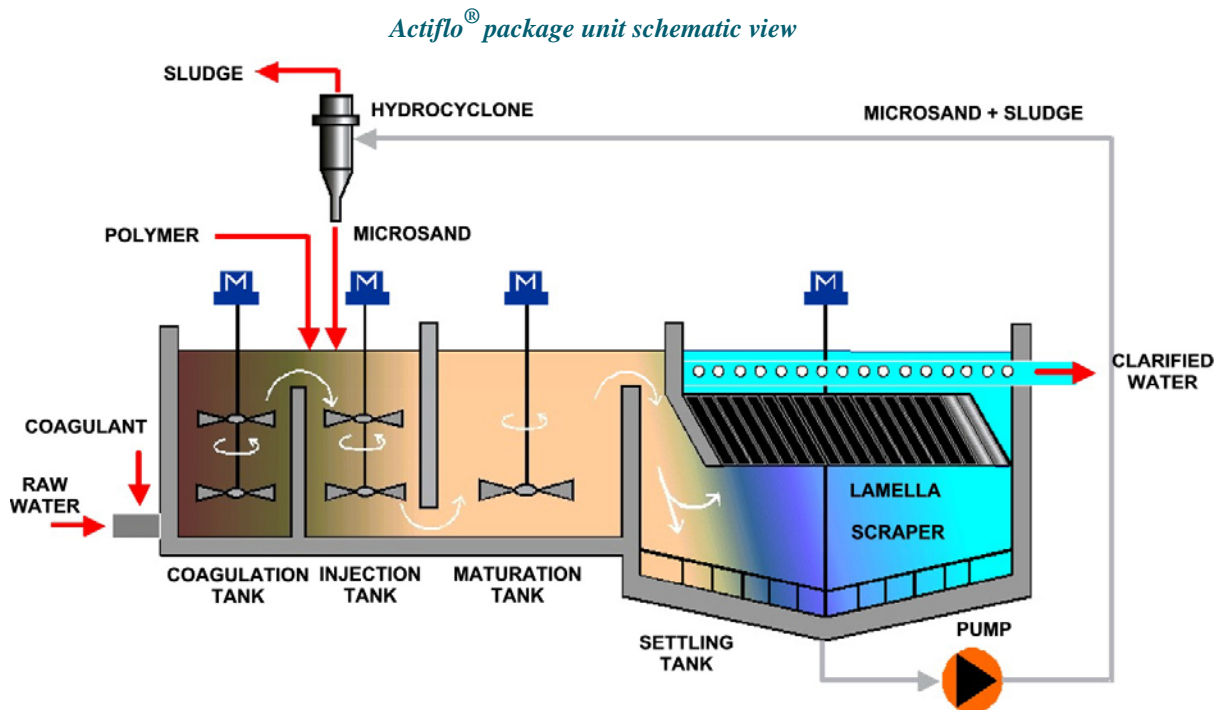
Chemical savings of up to 40% can be achieved with the **Actiflo**[®] process, compared to conventional systems. Operating costs can further be reduced by operating with **Dusenflo**[®] DUS packaged filters, specially designed for operation with **Actiflo**[®]. **Dusenflo**[®] combines efficient air and water backwashing techniques and specially designed under drain nozzles, maintaining a perfectly clean filter media and a reduced number of backwash cycles. All these elements combined translate into major energy savings, as well as increased water production.



HOW DOES IT WORK

ACTIFLO[®] settling process

The Ballasted Clarification process is based on a tank configuration doing coagulation, injection and maturation of the floc, dosage of the microsand and a lamellar settling, all combined to provide a high performance and reliable water treatment system.



- **Water coagulation**

A coagulant is injected to the raw water upstream of the unit. The water then enters a rapid mix tank to destabilize colloidal matter.

- **Flocculation**

A polymer is injected to the coagulated water. The microsand is used to weigh down the flocs. Moderate mixing accelerates the formation of polymer bridges between pin flocs, suspended solids and microsand. Larger and heavier flocs are formed.

- **High-rate settling**

Heavy flocs, ballasted by microsand, settle quickly in the lamellar tube area down to the thickening hopper. Clarified water is collected in a series of troughs. Filtration and disinfection can follow, if required.

- **Microsand recirculation**

The settled sludge is continually pumped to a hydrocyclone, where sand and sludge are efficiently separated. The hydrocyclone recycles the microsand back into the injection tank and discharges the sludge throughout the process.

OPERATION AND CONTROL

The **Actiflo**[®] package plant comes complete with all the required monitoring equipment. It also includes a control panel and a Human Machine Interface. On board instruments can include such items as turbidimeters, pH-meter, and chlorine analyzer. As an option, John Meunier can offer a remote monitoring system to complete the ACP package plant.

MODELS

- The **Actiflo**[®] units are manufactured in our plant and delivered pre-assembled.
- For increased treatment capacity, these units may be installed in parallel.

<i>Model</i> ¹	<i>Capacity</i> ² at 40 m/h (16 gpm/sf)	
	m ³ /d	MGD
ACP-150R	1000	0.25
ACP-300R	2000	0.5
ACP-450R	4000	1.0
ACP-550R	6000	1.5
ACP-600R	8000	2.0
ACP-700R	12500	3.3
ACP-750R	14250	3.8

1. Other units are available upon request.
2. Unit capacities are adjusted depending on application and can be up to double the presented value.

- The **Actiflo**[®] ACP units are available in three configurations: as the **Actiflo**[®] ACP process alone (clarifier only), added with a separate **Dusenflo**[®] DUS filter package unit (clarifier and one or multiple filters) or as the **Actifloc**[™] AFP (also called Actifilter), combining the **Actiflo**[®] clarifier and the **Dusenflo**[®] filter in the same packaged unit (clarifier and filter).
- Different options are available to complete the package plant supply.
- Some ACP models can be installed on truck floats, trailers or containers.
- Manufacturing, delivery, installation and start-up are carried-out promptly.

JOHN MEUNIER

Head Office

4105 Sartelon
 Saint-Laurent (Quebec) Canada H4S 2B3
 Tel.: 514-334-7230 www.johnmeunier.com
 Fax: 514-334-5070 sales@johnmeunier.com

Ontario Office

2000 Argenta Road, Plaza 4, Unit 430
 Mississauga (Ontario) Canada L5N 1W1
 Tel.: 905-286-4846 www.johnmeunier.com
 Fax: 905-286-0488 ontario@johnmeunier.com