

Actina[®] Pack

Compact Softening Process

By reducing calcium Hardness, ACTINA[™] PACK is a water softening technology based on a catalytic crystallisation process for both municipalities and industries. This process is carried out in a reactor where nucleation reaction takes place after pH was risen by Lime or Soda injection in a presence of a catalyzer: the micro-sand. The reactor is then followed by dual media filters to meet treated water turbidity and TSS requirements.

From 38 up to 162 m³/h.

Veolia can also design ACTINA PACK upon request according to projects specific flowrate and hardness.



FEATURES & BENEFITS

- High velocity (80 - 100m/h) resulting in a very compact technology – Small footprint compared to other existing technologies
- Coagulant and polymer not needed resulting in lower CAPEX compared to others existing softening technologies
- Very efficient calcium removal performances
- Easy by-products handling: Calcium pellets that can be used in road construction or in agriculture soil fertilization
- Materials certified for drinking water application according to ACS (French food grade certification)



APPLICATIONS

- Municipal:
 - Drinking water softening
 - Pipes scaling reduction
- Industry:
 - Boilers / heater & hot circuit scaling issues reduction
 - Pretreatment before demineralization

IONSOFT[™]

- When using caustic soda for decarbonation, a softener is needed. Refer to our Ionsoft standard softener product range.



HYDREX[®] CHEMICALS

Associated conditioning Hydrex[™] solutions for optimum operation. Serie 9000: Lime / Caustic Soda /Sulfuric Acid, Sand.

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.





REACTORS				
Model	Unit	ACTINA 50	ACTINA 100	ACTINA 150
Raw water flow rate (with caustic soda)	m ³ /h	47 - 53	90 - 100	145 - 162
Raw water flow rate (with lime)	m ³ /h	38 - 42	70 - 80	115 - 130
Reactor diameter	m	0.8	1.1	1.4
Reactor total height**	m	6.9	7.6	8
GRAVITY FILTERS				
Model	Unit	F2030	F2830	F3430
Quantity of filters	u	2	2	2
Filter internal diameter	m	2	2.8	3.4
Filter cylindrical height	m	3.8	4	4.1
Media type	-	Sand + Anthracite or pumice		
STANDARD ACTINA PACK CAPACITY				
Model	Unit	ACTINA 50	ACTINA 100	ACTINA 150
Raw water hardness	mgCaCO ₃ /l	700 - 1000		
Treated water hardness	mgCaCO ₃ /l	30-150		
Daily produced water	m ³ /j	1000 - 1300	2000 - 2500	3000 - 4000

* Actina Pack standard design can be modified on request to be suitable to projects specific flowrate and hardness.
 ** Reactor height is adapted upon raw water hardness, and calcium hardness removal requirements.

Feed water requirements

Non corrosive water.

Parameter	Unit	Caustic soda	Lime
Min water temperature	°C	1	8
Max water temperature	°C	30	30
Raw water quality	mg TSS/l	20<	20<



ACTINA PACK being installed on-site

Environmental conditions

Indoor. Non-corrosive atmosphere
 Standard design can be modified on request to be suitable for other environmental conditions.

Other specifications

Depending on water quality and project specifications, it is sometimes necessary to balance water pH before dual media filters to avoid sand scaling phenomena.