

Cooling Tower Automatic Filtration System

# AFS

## Self-Cleaner



**NEWIN MACHINERY**  
[www.newincoolingtower.com](http://www.newincoolingtower.com)

## ABOUT AFS

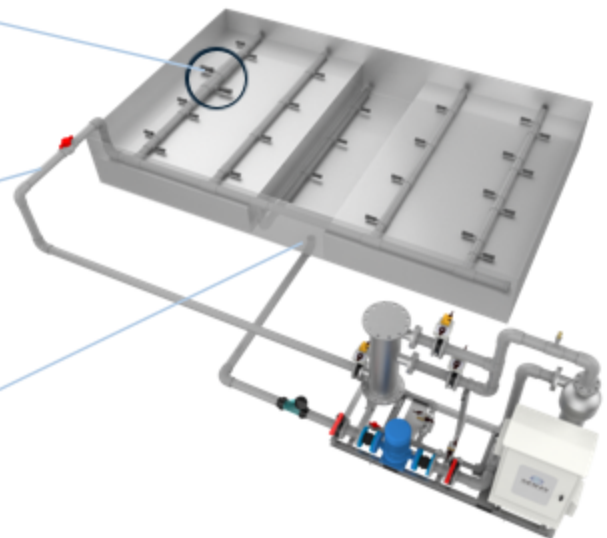
**AFS** series self-cleaner, the advanced **Automatic Filtration System** design to stably and effectively control suspended solid in cooling tower circulating water in the effort of minimizing legionnaire's disease, especially useful for the dusty environmental, and further reducing chemical usage needed for the system, saving energy and resources.



Turbulator nozzles speeds up the water circulation, prevent impurities from settling and keep basin clean.

Filtered outlet water is distributed via turbulator nozzles into water basin.

Basin drain outlet connected with AFS for collecting sewage water into filtration system.



## Working Principle

When the AFS filtration system is in operation, it will pump out a portion of the circulating water for filtration without disturbing the main circulation line. The impurities in the system are filtered through gradual and multiple cycles of interception, and finally removed from the system through necessary backwash. This design can effectively reduce the burden on the filter, improve filtration efficiency, and reduce operating costs.

## BENEFITS

1

### **Improve water quality and reduce energy consumption**

- Effectively remove suspended matter, impurities and some dissolved substances in water, significantly improve water quality.
- Reduce scaling and corrosion, improve heat transfer rate and reduce energy consumption.



### **Equipment protection, prolong the service life**

- Further preventing algae blooms, bacterial growth and other problems in the water system.
- Ensuring the stability of the water quality in the cooling tower can also prevent equipment failure and shutdown caused by the deterioration of water quality.

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### **Reduce operating and maintenance cost**

- Reduce chemicals dosage of water treatment, reduce frequency of heat exchanger cleaning and prevent the failure and shutdown of equipment to reduce operating and maintenance cost.



### **Environmental protection, energy conservation and emission reduction**

- Reuse of recycled water and sewage pretreatment can save total water consumption, improve water quality and reduce the pollution of the environment caused by the direct discharge of sewage.

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## FEATURES



Solid and liquid of circulating water can be efficiently separated after **the primary filtration**.

**The secondary filtration** supports to remove trace fine impurities in the liquid to achieve further purification.

**Backwash** is the necessary link for ensuring the continuous high-quality filtration, it can effectively remove impurities in the filtration, restore the system to efficient filtration performance, and extend the service life of the equipment.

**Siemens PLC automation/intelligent controller** can remotely control multiple cooling tower equipment, convenient and simple operation.

**Ease of maintenance**, just regular inspection.

## MAIN PARTS



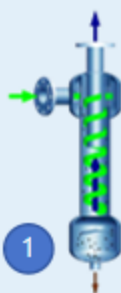
### Power Source

Centrifugal pump with stainless steel impeller, Large flow, high head, stable operation for driving fluid circular flow.



### Solenoid Valve

Precisely controls the opening and closing of the filter pipeline, as well as the flow, direction and speed of the circulating water.



① **The Primary Filter** is an excellent pre-filtration device, efficient and stable solid-liquid separator which can be used in conjunction with ② **The Secondary Filter** that is large flow, high capacity for removing trace fine impurities in the liquid, to obtain better overall filtration performance, reduce filter material consumption and material emissions.



### Control Center

Siemens PLC controller, automatically receiving, processing and executing various control instructions to ensure the normal operation and efficient filtration of the filtration system.

## TECHNICAL PARAMETER

Model	AFS-50	AFS-65	AFS-80	AFS-100	AFS-125	AFS-150	AFS-200	AFS-250	AFS-300	
<b>Cooling Tower Water Flow</b>	150-210	250-350	375-525	590-825	915-1290	1310-1860	2330-3330	3660-5190	5330-7500	
<b>Screen Filter</b>	50-100 Micron	50-100 Micron	50-100 Micron	50-100 Micron	50-100 Micron	50-100 Micron	50-100 Micron	50-100 Micron	50-100 Micron	
<b>Pump</b> (SUS304 impeller)	2.2 kw	4 kw	4 kw	5.5 kw	7.5 kw	15 kw	30 kw	45 kw	75 kw	
<b>Control Cabinet</b>	Siemens PLC controller	Siemens PLC controller	Siemens PLC controller	Siemens PLC controller	Siemens PLC controller	Siemens PLC controller	Siemens PLC controller	Siemens PLC controller	Siemens PLC controller	
<b>Dimension</b> (m)	L	2	2	2.1	2.3	2.5	2.6	3	3.5	4
	W	0.8	0.8	0.8	1.2	1.5	1.7	2.1	2.8	2.8
	H	1.6	1.7	1.9	2.1	2.3	2.7	3.5	3.7	4
<b>Weight</b> (kg)	150	229	310	485	728	1140	2032	2999	4349	



# CONTACT US



**NEWIN COOLING TOWER 钮盈·冷却**

网址Web: [www.newincoolingtower.com](http://www.newincoolingtower.com)

## 新加坡公司

**Newin Cooling Tower (Singapore) Pte Ltd.**

地址Add: 1 Corporation Dr. #08-13 REVV West Enterprise Hub, Singapore 619775.

电话Tel: +65 6610 3951

邮箱Email: [singapore@newinmachine.com](mailto:singapore@newinmachine.com)

## 俄罗斯公司

**Представительство Shenzhen Newin Machinery в России и странах СНГ**

地址Add: 150 корп.2. Варшавское шоссе, Москва, Россия.

150 bldg.2. Warsaw Highway, Moscow, Russia.

邮箱Email: [russia@newinmachine.com](mailto:russia@newinmachine.com)

## 深圳公司

**Shenzhen Newin Machinery Co., Ltd.**

地址Add: 深圳市龙岗区平湖华南城铁东12栋5楼

No.510, Building 12. Tiedong, China South City, Pinghu, Shenzhen, China.

电话Tel: 0755-23077266

邮箱Email: [sales@newinmachine.com](mailto:sales@newinmachine.com)

## 制造基地

**Newin (Guangdong) Machinery Co., Ltd.**

地址Add: 广东省惠州市博罗县石湾镇铁场村钮盈工厂

Newin Factory, Tiechang Village, Shiwan Town, Boluo County, Huizhou City, Guangdong Province, China.

电话Tel: 400 808 1026

