

Wallace & Tiernan® Process Systems

UFOX 10 Sludge water recycling unit

The Wallace & Tiernan® UFOX 10 system is a sludge water recycling unit for the recovery of refill water in swimming pools. The treatment capacity is max. 10 cubic metres of filter backwash per day. This system based primarily on the ultra filtration process stage makes it possible to lower the operating costs of pools, mainly water and energy. The UFOX 10 unit does not route the filter backwash into the sewer system but treats it first and then uses it as refill water. It is thus preserved for the swimming pool process. The brine resistant UFOX 10-S version is especially designed for salt water pools.

Design and function

The UFOX 10 sludge water recycling unit is a ready-to-use system to treat refill water. The unit consists of the treatment stages of pre-filtration, ultra filtration and disinfection. Ultra filtration is the central treatment stage carried out with two powerful UF modules. Therefore it is possible to return the filter backwash treated in this way – the filtrate – to the pool cycle. It corresponds to the operating water type 1 defined in DIN 19645 "Treatment of sludge water from systems for treatment of water of swimming pools and baths" and meets with the highest requirements of this DIN standard. The returned filtrate volume – and that of the saved water – is displayed on a water metre integrated into the unit.

UFOX 10: A EWO Pool module

Sludge water recycling with UFOX is one module of the Wallace & Tiernan® EWO pool system to optimise energy and water consumption. Other modules include:

- **ECON Pool system** to save energy with the load-dependent control of the circulation rate
- **Barrier® M UV system** to reduce chloramines and to save refill water
- **DEPOLOX® Pool** measurement and control regulating system with CEDOX control to optimise treatment of the swimming pool water

Benefits:

- Considerable reduction in operating costs – fresh water, waste water, energy
- Short amortisation time
- Fully automated operation with daily function and integrity tests
- Dual virus barrier with more than 7-log stages acc. to DIN 19645
- UFOX 10-S version is applicable for salt water pools
- Self-optimising rinse intervals
- Compact, space saving design



Product Sheet

Water Technologies

SIEMENS

Technical data

Treatment capacity:

max. 10 m³/day (2642 gallons/day)

Feed tank (raw water):

85 l (23 gallons)

Filtrate tank:

200 l (53 gallons)

Ultra filtration stage:

2 UF multibore membrane modules each with 4.5 m² (48 ft²) of filtering area

Pore size of the UF module:

0.01 µm

Disinfection/oxidation stage:

Dosing of sodium hypochlorite with integrated Chem-Ad® VPP pump
Continuous filtrate monitoring by measuring the redox voltage
Backwash of the UF modules with automatic addition of cleaning chemicals

Connections:

Feed: DN 25

Filtrate: R 3/4 "

Concentrate (wastewater): DN 32

Compressed air: G 1/4 ", 7 bar (102 psi)

Power supply:

1/N/PE AC 230 V, 50 Hz

Power consumption:

max. 2 kVA

Fuse:

max. 16 A

Protection:

IP 41

Ambient temperature:

5 – 35 °C (41 – 95 °F)

Max. salt concentration in salt water pools (UFOX 10-S only): 4 %**Energy consumption:**

Approx. 1.5 kWh/m³ filtrate

Dimensions (W x H x D):

1200 x 1800 x 750 mm (4 x 6 x 2.5 ft.)

Weight (empty):

Approx. 350 kg (772 lb.)

Digital inputs:

1 x level alert, sludge water

1 x release, backwash

1 x release, filtrate return

1 x release, UFOX

Output contacts:

1 x sludge water pump

4 x freely configurable alarm relays

Interfaces:

RS 232 for configuration download or Firmware update

RS 485 for connection to ChemWeb-Server and OPC-Server

Control unit:

Fully automatic microprocessor control unit

Display:

Backlit LCD graphic display

Resolution 240 x 64 pixels

Clear and easy-to-use display

Assembly and maintenance

The UFOX unit is delivered ready assembled, electrically wired, and tested. At the installation site, only the UF module needs to be screwed in and the feed, filtrate, waste water lines and power to be connected together with an external compressed air supply (oil-free!) if needed.

Interfaces**OPC Server**

Easily interfaces with higher level visualisation systems using Wallace & Tiernan® OPC Server

ChemWeb-Server

Easily interfaces with Web technologies using Wallace & Tiernan® ChemWeb-Server. Complete display and setting of operating parameters of the UFOX 10 unit with predefined Internet pages.

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