

# AF400 RAINWATER UNIT

- Compact, self-contained module.
- Pre-assembled on vibration damped, height-adjustable steel frame.
- Highly economical demand-responsive water supply.
- Choice of 5 super-silent multi-stage centrifugal pump models.
- Single phase or 3-phase units.
- Through-flow diaphragm pressure vessel.
- High reliability.
- All parts in contact with water are corrosion proof.
- Supplied fully pre-assembled on steel frame with stainless steel manifolds.
- **Electronic controller**  
Fully automatic system with comprehensive signals array and volt-free contacts for run and fault signalling (BMS compatible)

## Self-contained booster set & break tank combination.

The AF400 is a fully automatic rainwater harvesting control unit with an integral 400-litre mains water cistern. It is designed for plant room installation and is supplied with rainwater from a bulk storage tank. If no rainwater is available, then the unit uses the water from its own 400L cistern. When the rainwater tank is replenished, the unit automatically reverts to drawing water from there.

The unit is equipped with two pressure booster pumps, with a choice of five different models to suit a range of applications. An additional submersible feed pump is required for installation in the remote rainwater storage tank.

This provides an ideal solution where it is not desirable to use a mains water back-up supply to the bulk tank, and where it is not practical to utilise a gravity break tank (i.e. header tank). This system is also suitable for applications where long distances between plant room and storage tank must be catered for.



AF400 Rainwater Utilisation Unit



## Flexible System Design

Our comprehensive range of specialist items has been developed specifically for rainwater harvesting systems. Because the range consists of separate components, it has exceptional flexibility.

These items are suitable for almost any system design, whether you're planning a system for a small house, school or large industrial or commercial premises.

# AF400 RAINWATER UNIT

## MAIN FEATURES

- Maintenance-free electronic controls
- Automatic mains water top-up
- Pump operation equalised by automatic duty cycling and integrated testing of idling pumps
- Automatic fault changeover and peak duty operation give high operational reliability
- Dry running protection for pumps
- Automatic cistern feed pump control
- Low voltage plant and level control
- Integrated electronic overload protection
- Comprehensive signal indication at the control unit and volt-free contacts for collective run and fault signals
- Ideally suited for use in conjunction with Building Management systems

## TECHNICAL DATA

Flow rate:	max. 16 m <sup>3</sup> /h (32 m <sup>3</sup> /h on request)
Max head:	56 m
Max. working pressure:	10 bar
Fluid temp:	+5°C to +35°C
Ambient temp.	max. 40°C
Power supply:	3 phase 230 or 400V, 50 Hz (or 1 phase 230V on request)
Overload protection:	integrated electronic overload control
Hybrid cistern:	400 litres
Pump control:	Fully electronic control of water supply and cistern make-up pumps, actuated by pressure transducer 4-20 mA and reed contacts
Connections:	
Outlets:	1.5" male (discharge manifold)
Inlets:	Free-flow mains water top-up to DIN 1988 (tank-integrated top-up tundish and non-splash inlet)
Cistern pump:	DN 50 inlet nozzle (cistern integrated with non-splash inlet)
Overflow:	DN 100 with overflow P-trap and full bore passage to DIN 1986
Dimensions:	780 W 1045 H 1440 D

The AF400 has a high degree of operational reliability due to the automatic pump changeover in the event of a fault and peak duty operation. Reliability is further improved by each pump having a separate suction line. Pump operation is equalised by automatic duty cycling and integrated testing of idling pumps.

Maintenance-free electronic controls give a permanent display of water level, system pressure and operational status. The entire assembly is mounted on its own vibration-dampened steel frame.

The AF400 is ideal for integration into Building Management Systems.

Model	Rated power (kW)	Full load current (A)		No. of pumps	No. of stages
		3~230V	3~400V		
AF400/304	0.55	3.3	1.9	2	4
AF400/305	0.75	3.6	2.1	2	5
AF400/603	0.55	3.3	1.9	2	3
AF400/604	0.75	3.6	2.1	2	4
AF400/605	1.10	4.9	2.8	2	5

Model	Mode	Max. head (m)	Pumping output in cu. m/h															
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AF400/304	one pump	45	40.5	35	28.5	20	10.1											
	both pumps	45	43	40.7	38	35	31.8	28.2	24	19.9	15	10						
AF400/305	one pump	56	50.2	43	34.9	25.1	14											
	both pumps	56	53.7	51	47.7	43.6	39.3	35	30	24.7	19.4	14						
AF400/603	one pump	33	32	30	27	23.8	20.5	16.6	12	7								
	both pumps	33	32.5	31.8	31	30	29	27.5	26	24	22.3	20.5	18.7	16.7	14.4	12.3	9.8	7
AF400/604	one pump	45	42.8	40	36.2	31.5	26	19.8	13	6								
	both pumps	45	43.8	42.5	41.3	39.8	38	36	34	31.5	29	26	23	20	17	13	10	6
AF400/605	one pump	56	54	51.3	47.6	43	37.8	31	23	14								
	both pumps	56	55	54	53	51.6	50	48	46	43.6	41	38	35	31	28	23	19	14

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