ARIAMAT



AUTOMATIC AIR FEEDER

Materials

Component

Upper elbow

Feeder body

Conical fittings

Air valve

Ball valve

Pipe



Material

Brass

Brass

Rubber

Polycarbonate

Polyethylene

Polyethylene

ARIAMAT

type

AR 300E	
AR 1000E	
AR 2000E	

Complete with connections and 1 m polyethylene pipe

Construction

The automatic air feeder ARIAMAT controls the air cushion in the pressure vessel by replacing the air dissolved in the water at every pump start. This device limits the number of pump starts and stops, allows a better use of the water reserve and improves the overall performance of the automatic pressure system.

Operation

ARIAMAT operation is explained in pictures 1-2-3-4.

At the end of every cycle, ARIAMAT AR 300E, AR 1000E and AR 2000E let in the vessel 300, 1000 and 2000 cm³ of air respectively.

For a good operation of ARIAMAT it is necessary to have enough suction pressure in the pipe whilst the pumps are running.

If the pumps work under positive suction head and water falls to the suction inlet, there will not be enough suction pressure in the suction pipe to allow a correct operation of ARIAMAT; in this case, it is necessary to create an artificial loss in the suction pipe, by closing gradually the gate valve when the pump is running until the water level in the ARIAMAT starts dropping.

When a sufficient suction pressure to grant a safe ARIAMAT operation cannot be achieved, it is recommended to feed the vessel with a compressed air system and level probes.

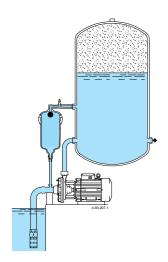
Description of the supply

The ARIAMAT is normally fitted on our automatic water systems. The supply of ARIAMAT, as a spare part to be installed by the customer, includes:

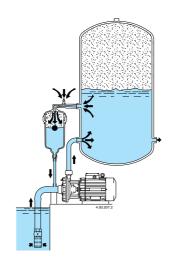
n° 1 ARIAMAT assembled with upper elbow and air valve;

m 1 Polyethylene tube with ring nut and fitting for connection to the pump suction side.

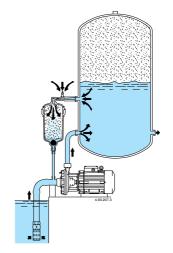
Pressure in m	Pressure vessel capacity in litres												
	100	200	300	400	500	750	1000	1500	2000	3000	4000	5000	
14/28	AR 300E AR								AR 1000l	E	AR 2000E		
20/30	AR 300E						AR 1000E						
30/40	AR 300E					AR 1000E					AR 2000E		
35/55	AR 300E					AR 1000E					AR 2000E		
55/70	AR 3	300E			AR	1000E	1000E				AR 2000E		
75/95	AR 300E	AR 300E AR 1000E					The use of an air compressor is recommended.						



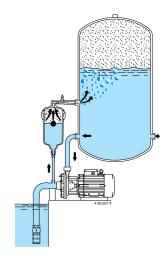
1) When the pump is stopped, ARIAMAT is full of water.



2) When starting, the pumps creates a suction pressure which also takes the water from ARIAMAT, allowing some more water to come from the vessel. The water through the ARIAMAT venturi sucks air from the upper valve.



3) The water level in the ARIA-MAT drops until the ball valve moves to the bottom of the ARIA-MAT closing the hole of the pipe connected to the pump. ARIAMAT is now full of water.



4) When stopping, there is a back-flow of water from the vessel through the pump, to the ARIAMAT. Air is pushed inside the vessel.